

379.73 F514B c.1

Finney, Ross Lee, 1875-1934

A brief history of the Amer

R.W.B. JACKSON LIBRARY

OISE CIR



3 0005 02025 1065

THE LIBRARY

The Ontario Institute
for Studies in Education

Toronto, Canada



364

LIBRARY

JUL 19 1969

**THE ONTARIO INSTITUTE
FOR STUDIES IN EDUCATION**

The Modern Teacher's Series

EDITED BY WILLIAM C. BAGLEY

**A BRIEF HISTORY OF THE AMERICAN
PUBLIC SCHOOL**

The Modern Teachers Series

EDITED BY WILLIAM C. BAGLEY

FUNDAMENTALS OF EDUCATION

By BOYD H. BODE

A BRIEF HISTORY OF THE AMERICAN
PUBLIC SCHOOL

By ROSS L. FINNEY

THE IMPROVEMENT OF TEACHING

By GEORGE E. FREELAND

THE LESSON IN APPRECIATION

By FRANK HERBERT HAYWARD

EDUCATING FOR FREEDOM

By EDWARD O. SISSON

THE PROJECT METHOD OF TEACHING

By JOHN ALFORD STEVENSON

A BRIEF HISTORY OF THE AMERICAN PUBLIC SCHOOL

*A GENETIC STUDY OF PRINCIPLES, PRACTICES,
AND PRESENT PROBLEMS*

BY

ROSS L. FINNEY, PH.D.

ASSISTANT PROFESSOR OF EDUCATIONAL SOCIOLOGY
UNIVERSITY OF MINNESOTA

New York

THE MACMILLAN COMPANY

1927

All rights reserved

PRINTED IN THE UNITED STATES OF AMERICA

COPYRIGHT, 1921,
By THE MACMILLAN COMPANY.

Set up and electrotyped. Published March, 1921. Reprinted
February, 1923; September, 1924; July, 1925; August, 1927.

Norwood Press
J. S. Cushing Co. — Berwick & Smith Co.
Norwood, Mass., U.S.A.

PREFACE

IT is almost universally agreed that the history of education, as traditionally organized and presented, is of doubtful value in the normal school curriculum. The reasons for this it is not necessary to enumerate here; they are familiar to all who have had to do with the training of teachers. It would be a distinct loss, however, to eliminate the subject entirely, because historical perspective is indispensable to an adequate comprehension of present-day education. This text has grown out of five years' experience in teaching the history of education to hundreds of normal school students; and is an attempt to arrange the material, as set forth in the secondary sources, in such a way as to meet the needs of normal school students. A glance at the Table of Contents will reveal the plan. Attention is confined to the American public school system, in which the candidate is to teach. The usual descriptions of ancient and medieval schools are omitted entirely, and even modern European developments are discussed only in so far as their relevancy is easily discernible by the typical student in a normal school. The bearing of early movements in our educa-

tional history upon current problems is explicitly pointed out. And the phenomenal developments of the past thirty years — usually omitted from the traditional type of history — are set forth at some length. The text is intended as a discussion of contemporaneous education from the genetic point of view.

For purposes of topical study cross references have been inserted in the text and a very complete index prepared.

ROSS L. FINNEY

TABLE OF CONTENTS

	PAGE
CHAPTER I. THE COLONIAL PERIOD, 1607-1776	1
<p>The Outlines of colonial history — The European origin of American institutions — The old aristocratic conception of education — The new religious conception of education — Schools in New England — New Amsterdam — Pennsylvania — The support of schools — Local taxes — The three sections — Dame schools — Men teachers — Schoolhouses — The education of girls — The curriculum — The New England Primer — Other subjects — Apprenticeship — Bad methods of teaching — Origin of the school district — Higher education — The disciplinary theory — Grammar schools.</p>	
CHAPTER II. ROUSSEAU	22
<p>Biographical sketch — The social situation — The unnatural education of the period — Rousseau's aim — The "Émile" — Naturalism the keynote of Rousseau's message — Basedow — Rousseau's disciples — Dewey quotes Rousseau — Rousseau the mouthpiece of democracy.</p>	
CHAPTER III. THE PERIOD OF NATIONALIZATION, 1776-1835	38
<p>Educational ideals of the early statesmen — The educational transition — The new nationalism — The new school system — The rise of a free school system in New York state — In New York City — In Pennsylvania — In the South — In the West — The tragedy of blindness to the signs of the times — Textbooks and methods — The Monitorial system — The primary school — Colleges — The academies — Education abroad.</p>	
CHAPTER IV. PESTALOZZI	64
<p>The historic background — Early life of Pestalozzi — "Leonard and Gertrude" — Later life of Pestalozzi — Pesta-</p>	

lozzi's pedagogical principles — Educational experimentation — Industrial training — Kindly discipline — The objective method — Its value to the teacher — The analytical method — Pestalozzi's influence.

CHAPTER V. HERBART AND FROEBEL 84

Herbart's biography — The aim of education — Subject matter — Arrangement of the curriculum — The recitation — Apperception — Herbart's influence — Froebel's early life — Froebel's first educational venture — The Blankenburg kindergarten — Disappointment and death — The kindergarten — Froebel's pedagogical principles — Mysticism — Self-activity — Social participation — Froebel's influence.

CHAPTER VI. THE GREAT EDUCATIONAL AWAKENING, 1835-1861 109

Territorial expansion — Industrial development — Humanitarian movements — Idealism — The educational awakening — The forerunners — Biographical sketch of Horace Mann — Secretary of the Board of Education — Horace Mann's reforms — Henry Barnard — Other sections — Other leaders — "Little Men" — Pedagogical literature of the period — Calvin Stowe and the beginnings of teachers' associations — Rise of the grading system — State and county administration — Colleges and academies — Unfinished business — The district school — Consolidation — Three principles — Support by taxation — The "bachelor argument" — Secular control — The "Godless schools" argument — State and county supervision — The "local self-government" objection — Solidarity — Foreign education.

CHAPTER VII. THE TRANSITION PERIOD, 1861-1890 . . . 146

Industrial development — Moral and religious changes — The South — Educational readjustments — The rise of the high school — Typical curriculums — Enrichment of the elementary curriculum — The grading system — The demand for science teaching — Spencer's famous essay — The elective

system — Teaching agriculture — The learned professions — Professionalizing teaching — Beginnings of the science of education — Pestalozzianism: E. A. Sheldon — The Oswego movement — The new normal schools and the Oswego idea — The kindergarten — Colonel Parker and the Quincy movement — Colonel Parker at Chicago — The National Education Association — Pedagogical literature — The tendency toward centralization — The Bureau of Education — Development of State School Systems — Development of city and county units — Educational progress in the South — The higher education of women — Extension work — Foreign education — Summary.

CHAPTER VIII. THE RECENT PERIOD, 1890-1920. A. EDUCATIONAL REORGANIZATION 186

The social situation — Economic developments — The spiritual side — International relations — A new education for a new age — Increase in the quantity of schooling — Improvement of quality — Investment and equipment — High school development — Higher education — College entrance — Internal changes: Adapting the school to the needs of the child — Making the grading system flexible — The Cincinnati plan — The Gary system — The Junior High School — The tendency away from localism: — (a) Consolidation — (b) The county unit — (c) State — (d) Federal — Educational extension — By correspondence — "Moonlight schools" — The Y. M. C. A. — Chautauquas, libraries, etc. — The professions — Law — Medicine — Engineering — Foreign education — The English Education Act of 1902 — China.

CHAPTER IX. THE RECENT PERIOD. B. ENRICHING THE CURRICULUM 226

The "common branches": Reading — Spelling — Language — Arithmetic — Geography — History — Hygiene — Social studies — Art — Music — The demand for industrial

education — What the schools are doing — The Smith-Lever and Smith-Hughes Acts — Corporation schools — Army schools — Vocational Guidance — Extra-curricular activities — Play — The Boy Scout movement — The wider use of the school plant — Religious education — The health movement — The high school curriculum — Flexner's "Modern School" — Higher education — The function of education in a developing democracy.

CHAPTER X. THE RECENT PERIOD. 1890-1917. C. EDUCATIONAL THEORY AND SCIENCE 263

Herbartianism — Pestalozzianism — The new Froebelianism: Colonel Parker — John Dewey — Appraisal of Dewey's theories — The extent of Froebelian practices — The kindergarten — Psychology and its applications — Child study — Educational psychology — Mental measurements — Standard tests — Psychology applied to classroom management — Psychology and the conduct of the recitation — Formal discipline — The educational survey — The rise of a science of education — Scoring buildings — Costs — Age-grade distribution — Pupils' achievements — Standards — Theories underlying curricular changes — Educational sociology — Popular demands — Teacher training — Teachers' voluntary associations — Pedagogical literature.

CHAPTER XI. THE PRESENT OUTLOOK 300

The significance of the war — War-time activities in the schools — School attendance in war-time — Lessons of the war — The schools make the nation — The extent of physical defects — Illiteracy — The need for Americanization — Vocational education — Applying the mental measurements — Education as a cure for the social unrest — The plight of the rural school — The special needs of the South — The shortage of teachers — Shall teachers unionize? — The program of the N. E. A. Commission — Education abroad — England — France — Germany — Russia — A glance into

TABLE OF CONTENTS

xi

PAGE

the future — The new super-civilization — The new schools
of the new age: curriculum — Universal high school grad-
uation — The new technique — The reason for federal aid —
New professional standards — The noble calling of the
teacher.

INDEX 325

EDITOR'S INTRODUCTION

THE young teacher, entering upon the service of the public schools to-day, needs three types of professional equipment. In the first place, he must be supplied with his "stock in trade"; he must be firmly and broadly grounded in the skills, knowledges, and ideals which it will be his business to transmit to the coming generation. In the second place, he must have an initial mastery of the technique of his art, — an initial skill in adapting his materials to the widely varying needs and capacities of children. In the third place, he must have some notion of the structure and purpose of the organization of which he will form a part, to the end both that his own practice may be intelligent and that he may participate intelligently with his fellow-workers in the progressive improvement of the school system.

It is to this third type of equipment that a book like this will chiefly contribute. And this phase of teacher-preparation is particularly important to-day. It is becoming increasingly evident that the best way to build a strong educational structure is to work from the bottom up rather than from the top down. Very rapidly during the past few years the practice of having school policies and programs worked out coöperatively

by the teachers themselves has been replacing the older practice of leaving to the administrative heads of the schools the sole responsibility for this important task of constructive educational thinking. This movement is so clearly both salutary and inevitable that it would be the height of unwisdom not to have it amply reflected in the professional schools that prepare teachers.

Mr. Finney's treatment of the American Public School is well adapted to introduce the prospective teacher to this broader study of his profession. It is a sound principle that complicated problems are best understood in the light of their genesis. Few problems are more complicated or more significant than are those that modern education presents. Probably in no other group of social problems will the genetic approach yield larger returns, provided it leaves with the student a clear and comprehensive picture of the gradual transition from simplicity to complexity.

The author of this book has had a long and successful experience in preparing recruits for the public-school service. He knows intimately his clientele. In addition, he brings to the interpretation of school problems a thoroughgoing acquaintance with the broader field of the social sciences. We are sure that the chapters which follow will abundantly prove the happiness of this combination.

WILLIAM C. BAGLEY.

A BRIEF HISTORY OF THE AMERICAN
PUBLIC SCHOOL

A BRIEF HISTORY OF THE AMERICAN PUBLIC SCHOOL

CHAPTER I

THE COLONIAL PERIOD, 1607-1776

The Outlines of Colonial History. — It will be remembered that the first English settlement in what is now the United States was made at Jamestown, Virginia, in 1607, and the next at Plymouth, Massachusetts, in 1620. The New Amsterdam colony was planted by the Dutch in New York in 1623, though it was taken by the English in 1664. Penn founded the settlement at Philadelphia in 1682; but meantime several other colonies had been started between Philadelphia and Jamestown, and also in New England and in the South. During the century and three quarters between 1607 and 1776 the colonists were busy with their small beginnings, — fighting the Indians, clearing the forests, and subduing the soil, taking their part in the European struggles for the control of this continent, starting their infant industries in mining, manufacturing, shipping, and trade, and laying the foundations of their social institutions. At the outbreak of the Revolutionary War there were about three million people in the English colonies, scattered along the coast from Maine to Georgia, and for the most part, between the Appalachian Mountains and the sea.

The European Origin of American Institutions. —

During the middle of the seventeenth century, while the English colonies in America were being settled, all Europe was disturbed by religious wars. In England the dispute was political as well as religious. It was the question of the divine right of kings. On the one side were the King, the English Church, and a social system based upon the ascendancy of the aristocratic classes. On the other side were the Parliament and the people, the dissenters in religion, and all those who demanded more democracy in all phases of life.

The Old Aristocratic Conception of Education. —

Each of these groups took a characteristic, and perfectly logical, attitude toward popular education. The royalist party, which favored authority in political and religious life, felt little or no interest in the instruction of the common people. They believed that the business of the poor was to work and not to think. "To make society happy," they said, "it is requisite that great numbers should be ignorant as well as poor." This point of view was maintained throughout the sixteenth, seventeenth, eighteenth, and even the early nineteenth centuries. It was vigorously urged against the democratic extension of education a century ago, and has some more or less conscious adherents to the present day. Virginia and almost the whole South were settled by English royalists. Southern society was laid out, therefore, on the aristocratic basis. The plantation type of farming sprang up as a result, and was greatly

avored by climatic conditions. Plantation farming in turn reinforced the aristocratic social system. No organized attempt was made, therefore, toward public elementary education. This function was left wholly to the family; which meant that the rich employed tutors, and that the poor grew up illiterate, except as occasional mothers taught their own, and perhaps also their neighbors', children to read. It is not surprising then to find Governor Berkeley writing in 1671: "I thank God there are no free schools nor printing presses, and I hope we shall not have them these hundred years." His hope was realized, and more too; for no system of public schools really worthy of the name developed in Virginia before the middle of the nineteenth century.

The New Religious Conception of Education. — As for the other party in England, their ideas about education grew more out of religious than out of political considerations. The Puritans, and those of kindred religious beliefs throughout Europe, held that the Bible is the guide of life, and the right to read and interpret it the test of religious liberty. Each person must therefore learn to read it for himself. Hence the necessity for schools. This religious motive is quaintly expressed in the preamble to the Massachusetts law of 1647: "It being one chief project of that old deluder Satan, to keep men from the knowledge of the Scripture," etc. New England and the Middle Colonies were settled by this type of people: the Pilgrims and

Puritans in Massachusetts, the Quakers in Rhode Island and Pennsylvania, the Dutch at New Amsterdam, the French Huguenots at New Rochelle, the Swedes in Delaware, and the Germans in Pennsylvania. The religious motive led to the early establishment of schools in all these colonies. There is record that the Boston town meeting in 1635 officially requested "Brother Philemon Purmont to become schoolmaster, for the teaching and nourishing of children." Provision was made for the teacher's salary. The records show that schools were established in Dorchester in 1640, in Ipswich and Salem in 1641, in Cambridge in 1642, in Weymouth in 1643, in Roxbury in 1645, and in Plymouth in 1650.

Schools in New England. — In 1647 the Colonial Court (the legislature) of the Massachusetts Bay Colony enacted the famous law whose preamble was just quoted. It provided

"That every township within this jurisdiction, after the Lord hath increased them to the number of fifty householders, shall then forthwith appoint one within their town to teach all such children as shall resort to him, to read and write, whose wages shall be paid, either by the parents or masters of such children, or by the inhabitants in general, by way of supply, as the major part of those who order the prudentials of the town shall appoint. And it is further ordered that where any town shall increase to the number of one hundred families or householders, they shall set up a grammar school, the master thereof being able to instruct youths so far as they shall be fitted for the university."

In 1650 Connecticut passed a law embodying the provisions of this Massachusetts law.

These early New England laws are of immense importance, since they mark the beginning of our American system of that free, secular, universal education which we now understand to be so necessary to democracy. We realize that one hundred million people cannot be fused in a common culture and assured equal opportunity without such schools. The early New Englanders did not realize this, nor did they foresee how great were the foundations that they were laying. They transferred the control and support of education from the church to the state by a sort of providential accident. It happened purely because church and civil government were not sharply distinguished in their minds. Such a law could never have been passed had not all the people of the colony been of the same religious faith. Thus came into existence the first system of state education in America, one of the first in the western world.

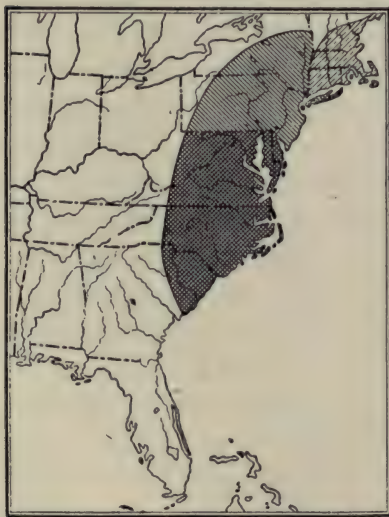
New Amsterdam. — The Dutch West India Company was required by the States General of Holland to maintain a clergyman and a schoolmaster. The schoolmaster's expenses are entered in early estimates of the company's expenses. The first schoolmaster, Adam Roelandsen, arrived in 1633. With his advent a school tax was levied. The schoolmaster was also grave-digger, court bellringer, and precentor.

Pennsylvania. — When William Penn arrived in the New World in 1682 at least one school was in operation among the Swedes, who had crossed over from Delaware. Provision was immediately enacted in Penn's "Frame of Government," and by the Assembly, for the education of all children. Parents and guardians were required, under penalty, to see that all children were taught a useful trade, and to read and write. The Penn Charter of 1701, however, made no mention of schools; the colony failed to maintain schools, the responsibility devolved principally upon the churches, and education in Pennsylvania consequently made a slow growth during the eighteenth century. However, the colony produced one remarkable genius in educational reform, Christopher Dock, whose "Schule-ordnung" (School Organization) anticipated some of the reforms of Pestalozzi.

The Support of Schools. — Contributions, tuitions, "rates," and local taxes were the most important sources of the support of colonial schools. It is interesting to note that a load of wood was often included in the tuition charge. The rate, or rate bill, was a per capita tax levied on the children attending school. That is, parents were taxed in proportion to the number of children they sent to school. The plan, which was borrowed from England, was in general use not only throughout the colonial period, but in some states down to the middle of the nineteenth century.

Local Taxes. — The growth of the local tax idea during the colonial period was very significant because out of it eventually grew our system of free public schools. ✓ Mention was just made of local taxes in the case of the first school in New Amsterdam. It was only in New England, however, that the idea took root and developed; elsewhere it eventually died out. The following are typical extracts from New England town records. New Haven, 1651: "For the encouragement of Mr. James in teaching school, the Court ordered that he should have £10 for the year, to be paid out of the town treasury; the year to begin when he begins teaching. The rest he is to take of the parents of the children that he teacheth, by the quarter, to make him up a full recompense for his pains." Boston, 1683: "That the town shall allow £25 per annum for each school for the present, and that such persons as send their children to school (that are able) should pay something to the master for his better encouragement in his work." The laws of both Massachusetts and Connecticut, as we have seen, required each town to maintain a town school. The fine that the town had to pay if it did not do so ✓ was almost enough to maintain the school. The town school had to compete with private elementary schools which charged tuition. Hence the town schools gradually dropped the tuition charge; naturally if the people in any case had to pay taxes they did not care to pay tuitions also. As practically all the people

were of the same religion, that religion could be taught in the town school. Religious differences were therefore no obstacle to tax-supported schools. By the middle of the eighteenth century, Boston had firmly established the principle and practice of tax support. Eventually free, tax-supported town schools became



THE THREE SECTIONS

the rule throughout New England, though the rate bill persisted quite generally as one form of local taxation. Private schools gradually became the exception, although "dame schools" for very young children continued. Thus it was in New England that the local tax system had its chief development.

The Three Sections.

—For purposes of educational history the colonial region may conveniently be divided into three parts: New England, the Middle Colonies, and the South, as indicated on the accompanying map. A different institution took charge of education in each of these sections. In New England, as we have seen, the state early assumed the control, and to a large extent the support, of the schools. In

the Middle Colonies schools were maintained by the church; while in Virginia and the South education was left to the family. The reason for this has already been explained: each colony transplanted from England the type of school that corresponded to its own social system. It was only in New England, as we have seen, that a new institution developed, — namely, the free, tax-supported public school, which was destined eventually to crowd the other two systems almost entirely out of existence. This, however, did not occur until the nineteenth century, when civic rather than religious reasons began to necessitate universal enlightenment. As for New York City, the British seized that colony in 1664, while the royalists were temporarily in the ascendency at home. As a result there grew up in New York City a combination of the parochial and private systems. Due to this influence, New York was seriously handicapped in her later educational development, as we shall see.

Dame Schools. — The “dame school” was a characteristic institution of the entire colonial period. It grew out of the responsibility each mother felt to ✓
teach her own children to read. Mothers who for any reason wished to be relieved of the responsibility ✓
sent their children to a neighbor who taught her own children the rudiments, often busying herself meantime with her house work. Often, too, such a school was conducted by elderly women in straitened circumstances. Record exists of one of these dame schools

- ✓ in New Haven as early as 1651. In the Indian attack on Deerfield in 1694, "Mrs. Hannah Beaman, the school dame, with her young flock on the home lot next northward, started for the fort. It was a race for life; the dame with her charge up the street, the enemy up the parallel swamp on the east to intercept them before they should reach the gate. Fear gave



A DAME SCHOOL

wings to the children; the fort was reached in safety and the gate shut." The following quotations describe the dame schools of the eighteenth century:

"An old maiden lady was employed occasionally a short time to teach children their letters and to spell out words. Her school was kept one month in my barn. She did what she could to teach the young ideas how to shoot, but was quite incompetent. I visited her school on one occasion and she had a small class advanced to words of three syllables

in the spelling book, and when they came to the word 'anecdote,' she called it 'a-neck'dote' and defined it to be 'a food eaten between meals.'"

"When I was three years old, I began to attend a child's school in the immediate neighborhood of my father's house. I recollect distinctly holding to my sister's apron as a protection against the cattle in the road. I also remember the appearance of my primer, from one corner of which the blue paper covering had been torn. . . . My patient and faithful instructress taught me to read before I could speak plain; considerately mingling the teacher and the nurse, she kept a pillow and a bit of carpet in the corner of the schoolroom where the little heads throbbing from a premature struggle with the tall double letters and ampersand, with Korah's troops and Vashti's pride, were permitted, nay, encouraged to go to sleep."

The "dame school" persisted till the early part of the nineteenth century, when as the primary school, it was gradually merged into the public school system (see p. 57). ✓

Men Teachers. — The dame school was for small children. During the winter months, when older children attended school, it was customary to employ a man. Too often such men were ignorant and incompetent; sometimes they were manual laborers who supplemented their summer's wages by a few weeks' teaching in the winter. ✓

Schoolhouses. — At first there were no schoolhouses. Schools were held in kitchens, garrets, barns, or any other available space. The meeting house was often used for school purposes. Often old meeting houses

were made over for school purposes. Gradually, however, schoolhouses were erected; though it was not unusual throughout the period to utilize other buildings, especially for dame schools.

✓ **The Education of Girls.** — There is no very satisfactory evidence as to the education of girls. It is certain that some town schools provided for them; but it is probable that some did not. In many localities the education of girls, at least before the Revolution, must have been confined to the dame schools. Before the close of the eighteenth century, "most New England towns had made some provision for the education of girls, either in short summer terms, or at the noon hours, or other interval, of the town (boys') school. But no such opportunity was afforded girls to make the most of themselves, as had been forced upon most boys, for a half-dozen generations." Private schools for "misses" were rare.

The Curriculum. — Life in New England during the colonial period was characterized by an extreme moral and religious seriousness, and from this seriousness has come a most important contribution to our whole American civilization. But, unfortunately, religion practically monopolized the spiritual and cultural sides of life. While it is true that many of the first settlers of Massachusetts were of an exceptionally high intellectual type, their culture was limited to theology and the classical literature and philosophy. After the first generation passed away there was, due to

various causes, a distinct decline in intellectual interests. Especially during the eighteenth century, New England became almost unbelievably destitute of art, science, music, and secular literature. This poverty of culture was reflected in the curriculum of elementary schools. The course of study consisted almost entirely of reading and writing.












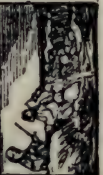
The New England Primer. — The famous New England Primer was in very general use. This is a book of about eighty pages. It contains, first, the alphabet, then a page of easy syllables, and next, five short word lists, the first of one syllable, the last of five syllables. Then follows an illustrated alphabetical rhyme, beginning

“In *Adam's* Fall
We sinned all.”

and ending

“*Zacheus* he
Did climb the tree
His Lord to see.”

Next come a page of “The Dutiful Child’s Promises,” beginning: “I will fear *God* and honour the *King*”; then “An Alphabet of Lessons for Youth,” consisting of scripture texts. After these are the Lord’s Prayer, the Apostles’ Creed, and the Ten Commandments. The next page is devoted to pious doggerel; then the books of the Old and New Testaments are listed. The

 <p>N</p>	<p>NOAH did view The old world & new</p>	 <p>G</p>	<p>As runs the Glass, Our Life doth pass.</p>
 <p>O</p>	<p>Young OBADIAS, DAVID, JOSIAS All were pious.</p>	 <p>H</p>	<p>My Book and Heart Must never part.</p>
 <p>P</p>	<p>PETER deny'd His Lord and cry'd.</p>	 <p>I</p>	<p>JOB feels the Rod, Yet blesses GOD.</p>
 <p>Q</p>	<p>Queen ESTHER sued And saves the <i>Jews</i>.</p>	 <p>K</p>	<p>Proud Korah's troop Was swallowed up</p>
 <p>R</p>	<p>Young pious RUTH. Left all for Truth.</p>	 <p>L</p>	<p>LOT fled to Zoar, Saw fiery Shower On <i>Sodom</i> pour.</p>
 <p>S</p>	<p>Young SAM'L dear The Lord did fear.</p>	 <p>M</p>	<p>MOSES was he Who <i>Israel's</i> Host Led thro' the Sea.</p>

A DOUBLE PAGE FROM THE *New England Primer*. From a facsimile copy published by Ira Webster in 1843.

numerals up to one hundred are printed in three columns, Roman, Arabic, and the words. The last page of this has "Mr." in large type in the lower right-hand corner. The next page is occupied with a wood cut appropriate to the inscription: "Mr. *John Rogers*, Minister of the Gospel in London, was the first Martyr in Q.

Mary's Reign, and was burnt at *Smithfield*, February the fourteenth, 1554.

His wife, with nine small Children, and one at her Breast, following him to the stake, with which sorrowful

sight he was not in the least daunted, but with wonderful Patience died courageously for the

Gospel of Jesus Christ." Then follow seven pages of admonitions, in homely verse, to his children, "writ" some days before his death. There can be no doubt that these verses were well selected to impress the youth of that period with a profound reverence for the moral seriousness and personal heroism of the men who fought the battles of religious liberty and laid the moral

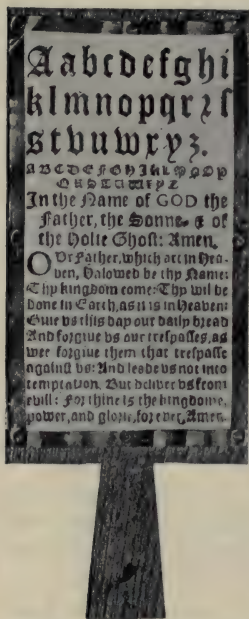


MR. JOHN ROGERS, minister of the gospel in *London*, was the first martyr in Queen MARY'S reign, and was burnt at *Smithfield*, February 14, 1554.

THE MARTYRDOM OF JOHN ROGERS. From Webster's *New England Primer*.

foundations of modern society. The last forty pages of the book are given over to the Shorter Catechism.

Other Subjects. — This was practically the only textbook in use in the elementary schools of New Eng-



THE HORNBOOK. A double-purpose instrument.

land between 1727, when it was printed, and the Revolutionary War. It, or similar books imported from England, was in use in the other colonies. Writing was also taught in these early schools, but in a manner very wasteful of time. It was customary for the master to pass from desk to desk of his pupils, sharpen each one's quill with his pen-knife, and then set a copy. Arithmetic was sometimes, but not always, taught; teachers depending upon manuscript textbooks that they in turn had taken from their teachers. Little was included beyond the fundamental operations, and teachers were

usually incompetent to the task of teaching these well.

This was the scope of the elementary curriculum. The poverty of ideas and narrowness of intellectual horizon can be imagined, especially if one reflects that Puritanism tabooed music, literature, art, and beauty.

Apprenticeship. — Apprenticeship played an important part in colonial education. The Pennsylvania law referred to was typical of all the colonies. A Massachusetts law in 1642 provided that each family must furnish its children and wards with elementary instruction and training in some trade.

“This court,” so the record runs, “taking into serious consideration the great neglect of many parents and masters, in training up their children in learning and labor, and other employments, which may be profitable to the commonwealth, do hereby order and decree, that in every town, the chosen men appointed to manage the prudential affairs of the same, shall henceforth stand charged with the care of the redress of this evil ; so as they shall be sufficiently punished by fines, for the neglect thereof, upon presentment of grand jury, or other information of complaint in any court in this jurisdiction : and for this end, they or the greater number of them shall have power to take account, from time to time, of all parents and masters, and of their children, especially of their ability to read and understand the principles of religion and the capital laws of this country, and to impose fines upon such as shall refuse to render such account to them when they shall be required ; and they shall have power, with the consent of any court, or the magistrate, to put forth apprentices, the children of such as they shall find not able and fit to employ and bring them up. They are also to provide that a sufficient quantity of materials, as hemp, flax, etc., may be raised in their several towns, and tools and implements provided for working out the same.”

Bad Methods of Teaching. — The methods were equally primitive. Each pupil in the school was in-

structed just as if he were being taught alone. The work was all memoriter; the motive for the most part was fear. The wasteful method of teaching writing has already been mentioned. Naturally the problem of discipline was a serious one; and the theology of the time — to the effect that children are born in total depravity and are to be regenerated only by rigorous discipline — led to severe and often cruel practices. The following words, written of European schools, perhaps do not greatly exaggerate American conditions: "The very sight of a school as one approaches it is depressing and cruel, for what with its floggings and tears, and the continual wailings that proceed from it, it invariably suggests a prison."¹ This accorded with the spirit of that age, for criminal treatment was cruel beyond belief.² Capital punishment was sometimes inflicted upon ✓ young people for persistent disobedience of parents.³

Origin of the School District. — As indicated in the law of 1647, the original school districts in Massachusetts consisted of the town, *i.e.* the township. As time passed the township gradually split up into smaller districts. The change, which was most significant for American education, came about in this way. The law required a school to be held in each township. As population increased, and especially as intellectual standards declined, it became convenient to move the

¹ Learned, "The Oberlehrer," p. 15.

² Wines, "Punishment and Reformation," Chapter V.

³ Boone, "Education in the United States," p. 49.

school from place to place in the township for the accommodation of the residents. Then the custom gradually grew up of dividing the school: that is, of holding part of it in one place and part in another,—in reality two or more schools. By mutual consent, the committeeman in each locality managed his own school. By Revolutionary times these little districts, subdivisions of the township, had become practically independent in the conduct of school affairs. As there was very little law regulating them, and no overhead supervision, these independent school districts were virtually autonomous. This was the origin of the district system, later sanctioned by law, and copied from New England by practically all of the Northern and Western states. It came into existence because it was suited both to the geography of the region and to the educational ideals of New England at their very lowest ebb. The district system is a bad arrangement, because it permits the people of any neighborhood to maintain as poor a school as their poverty may necessitate or their ignorance tolerate. It is increasingly a handicap to educational progress, because it stands in the way of consolidation, and thereby hinders the development of efficient graded schools and high schools in sparsely settled districts. We shall see what a long, slow process it has been to transfer the control and support of schools in part to the county, state, and federal governments.

Higher Education. — The story of secondary and higher education is an interesting chapter in colonial

history. Within six years after the settlement of Massachusetts Bay, Harvard College was established (1636) at Cambridge. This is indicative of the superior type of men that founded that colony; England produced no better men in that period of protest against Stuart autocracy than the Pilgrim and Puritan leaders who came to New England. Yale was established in 1701. Almost from the beginning a college was planned in Virginia, for, though the aristocratic society of that colony was indifferent to the elementary education of the common people, it was interested in the advanced education of the leaders. On account of Indian wars, however, nothing materialized till 1693, when the College of William and Mary was founded. Princeton, Pennsylvania, Columbia, Brown, Rutgers, and Dartmouth all made humble beginnings, some of them under different names, during the generation just preceding the Revolution.

In those days the college course consisted mostly of Latin, Greek, mathematics, and philosophy. The last included moral and political theory. Toward the close of the period a very little science was taught under the headings of astronomy, natural philosophy (which we should now call physics), and natural history (which we should recognize as elementary botany and zoölogy). Under good teachers Latin and Greek meant an intimate and stimulating acquaintance with the rich thought-life and art treasures of the ancient Greeks and Romans. This was undoubtedly the best organization of human

culture then available. Modern science was in its infancy. Modern literatures were but little developed, although what had appeared was neglected in the colleges; social science in the modern sense of the term was unknown. Hence the monopoly of the classics. As a matter of fact, their grip on the schools and colleges actually retarded the growth of modern interests throughout this entire period both in Europe and America.

✓ **The Disciplinary Theory.** — This grip was tightened by the disciplinary theory of education that prevailed. According to this theory the purpose of education is to strengthen the reasoning powers, not to furnish useful information. This was an ancient doctrine, which Plato had applied to mental gymnastics, and the medieval monks to moral self-denial. As the vernacular languages came into use, in the sixteenth and seventeenth centuries, the classics, held in the schools largely by sheer force of tradition, had to be justified. Thereupon teachers revived the disciplinary theory.

Grammar Schools. — The Latin Grammar school was the typical secondary institution of the period. Its principal, though not its only, function was to prepare candidates for college entrance. Many such candidates were prepared by tutors, however, especially in the South. Boys entered these schools at an early age, and spent their time in a weary grind on Latin grammar. Only rare teachers made the work interesting. The rod and the dunce cap were almost the only forms of motivation. Obviously a reform was overdue.

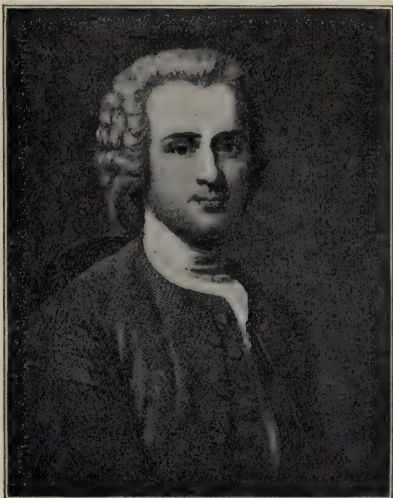
CHAPTER II

ROUSSEAU

Biographical Sketch. — Rousseau, one of the most interesting as well as influential personalities in history, was born at Geneva, Switzerland, in 1712. His mother died while he was still quite young, and his father's influence increased the naturally sentimental temperament of the boy. He was very carelessly educated in childhood, later was apprenticed to an engraver, and at sixteen became a tramp. His wanderings during the period of vagrancy that followed gave him an ardent love of nature, and an intense sympathy with the oppressed, poverty-stricken peasants. By a mere circumstance he attached himself to the family of a divorced woman a few years older than himself, and for ten years he depended mostly upon her for support. During this time his life was dissolute and sensual. Later he lived in much the same style at Paris. He was finally married to a woman with whom he had already lived for many years; but his children he turned over to a foundling home, losing all connection with them. From this account it will be seen that he was entirely irresponsible in character. But he was a brilliant writer in three separate fields, fiction, political theory, and education.

It is, of course, his educational writings with which we are concerned in this book.

The Social Situation. — The French Revolution broke out in 1789, soon after the close of our own Revolutionary War. Rousseau published his great educational work, "The Émile" (Ā-meel'), in 1762, thirteen years before the battle of Lexington and twenty-seven years before the storming of the Bastille. It was one of the causal factors in the great revolutionary upheavals of that time. The key to an understanding of that remarkable book is a clear idea of the social and political conditions in France at the period when it was written. Rous-



JEAN JACQUES ROUSSEAU

seau's aim was to reform the abuses of the time. French society was very unnaturally, and therefore very unjustly, organized. Practically all the land was owned by a very small percentage of the population, *i.e.* by the church and a few noblemen. The nobles, the clergy, and the king with his courtiers maintained an expensive, wasteful government, and lived in the

most extravagant and senseless luxury. They were supported by the rent of the land, and by rich incomes from government positions, the duties of which were usually merely nominal. The masses of the common people, on the other hand, paid both the rent and the taxes. Hence they were poverty stricken and ground down almost beyond imagination.

These social conditions produced an unnatural life for everybody. Appointments to government positions were secured chiefly through social favoritism; hence there swarmed about the court a crowd of ambitious idlers, competing for the favor of those in authority. This court society was regulated by an elaborate and artificial system of etiquette, in which it was of supreme importance to be strictly versed, since the prizes depended upon social graces rather than upon any sort of practical efficiency. And as one's prestige depended upon the appearance of leisure and luxury he could maintain, there was consequently an aristocratic contempt for all useful work. While, therefore, the nobility owned the land, they paid no attention to agriculture, and most of them were chronically in debt. They lived an aimless round of sport and social pleasures. The home with them became a broken-down institution. It was quite usual for husband and wife to live apart and for children to regard their parents as strangers. As an inevitable result of all this, life was hollow, barren, and utterly unwholesome. The existence of the French aristocrat of this

period is an extreme example of the rule that unjust privilege eventually spoils life for the privileged class itself. ✓

As for the poor, their degradation was extreme. Unnaturalness in their lives took on all the forms of privation and suffering. It was his pity for their misery and oppressions that first inspired Rousseau to his life work.

Society was organized somewhat on the French model all over Europe; though in some countries, notably in England, social injustice was not so extreme, and nowhere were personal relations quite so artificial, though French fashion and etiquette were copied everywhere, even in America. Hence Rousseau's message was almost as influential in other parts of Europe and in America as it was in France.

The Unnatural Education of the Period. — The education of the period preceding the French Revolution corresponded to the social system. The common people got practically no instruction at all. Prussia and New England were two exceptions. In Prussia, this was due to "benevolent despots," who established a system of public elementary schools during the eighteenth century; ✓ in New England, as we have seen, education was fostered by a democratic religion. ✓ England, during the eighteenth century, educated only a fraction of her common people, and these in schools conducted by philanthropic societies. Everywhere else education for the most part was reserved for the privileged and professional classes. We have seen what sort of edu-

cation these classes received in America; it was of the same sort in Europe. It was traditional, calcu-

VERBS.



Active. Passive. Neuter.



EIGHTEENTH CENTURY CHILDHOOD. The upper picture is from *The Little Grammarian*, published in Boston in 1819; the lower one is an early eighteenth century fashion plate.

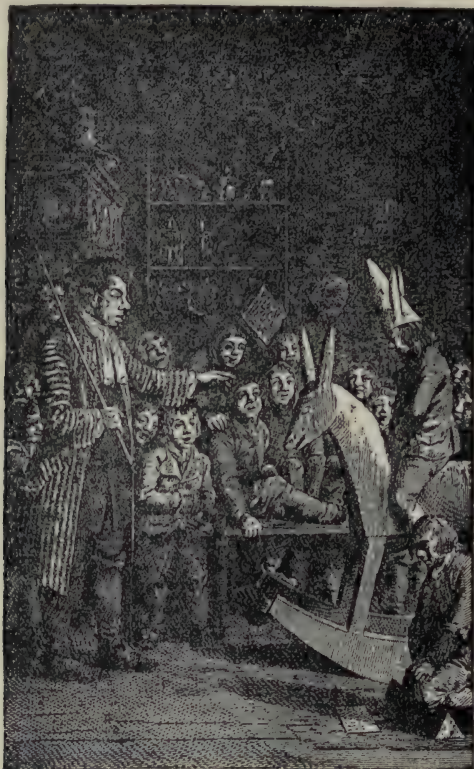
lated to turn men's minds to the past. Practical interests of the day were for the most part excluded; not so much by the intention of rulers as by the weight of tradition and the lack of organized materials reflecting the problems of everyday life. Nevertheless that suited the intent of rulers, since it tended to keep things as they were. It was disciplinary and memoriter; calculated to train men in obedience, but not to think for themselves.

In France the case was far worse than that. There professional education had

largely given place to a mere training in etiquette, designed to prepare the candidate to take his place in the extremely artificial, and therefore demoralizing, social life which centered around the court. The accompanying picture shows how little children were dressed and treated as grown-ups. In this connection Parker very aptly quotes Taine as follows :

“Even in the last years of the ancient régime (down to 1783) little boys have their hair powdered, ‘a pomatumed chignon (bourse), ringlets, and curls’; they wear the sword, the chapeau under the arm, a frill, and a coat with gilded cuffs; they kiss young ladies’ hands with the air of little dandies. A lass of six years is bound up in a whalebone waist; her large hoop-petticoat supports a skirt covered with wreaths, she wears on her head a skilful combination of false curls, puffs, and knots, fastened with pins, and crowned with plumes, and so high that frequently ‘the chin is half way down to her feet’; sometimes they put rouge on her face. She is a miniature lady and she knows it; she is fully up to her part, without effort or inconvenience, by force of habit; the unique, the perpetual instruction she gets is on her deportment: it may be said with truth that the fulcrum of education in this country is the dancing-master. They could get along with him without any others; without him the others were of no use. For, without him, how could people go through easily, suitably, and gracefully the thousand and one actions of daily life, walking, sitting down, standing up, offering the arm, using the fan, listening and smiling, before eyes so experienced and before such a refined public? This is to be the great thing for them when they become men and women, and for this reason it is the thing of chief importance for them as children.” ✓

All this not only moulded children to take their places in a formal, caste-ridden society that so sadly needed changing, but it was also extremely depressing,



A TYPICAL EIGHTEENTH CENTURY SCHOOLROOM

not to say cruel, to childhood, because it was all so extremely unnatural. And this applies quite as much to the formal discipline of the classical schools, with

their rigid compulsion, as to the regimen in etiquette to which little aristocrats were subjected.

Rousseau's Aim. — The whole aim of Rousseau's work was to reform, indeed to revolutionize, this unnatural and unjust régime. Naturalism was the keynote of all he wrote; and, due to the unnatural conditions of French society at the time, this message went straight to the heart of the French people, with whom he was accordingly immensely popular. The political system he attacked in his "Social Contract," which exerted an influence in fomenting the French Revolution quite analogous to that of "Uncle Tom's Cabin" in the anti-slavery agitation prior to our own Civil War. Its ideas appear in the first sentences of our Declaration of Independence. His "Émile" struck at the unnatural education by which each rising generation was trained to the unnatural order of things. He must have felt that the whole system would collapse if a single generation could only be reared to a natural life.

The "Émile." — The "Émile" is in five parts. Part one describes the education of Émile up to five years of age; part two, from five to twelve; part three, from twelve to fifteen; part four, from fifteen to twenty; while part five deals with the education of the woman who is to become Émile's wife. The book begins with these words: "Everything is good as it comes from the hands of the Author of Nature; but everything degenerates in the hands of man."

This has often been referred to as the keynote to Rousseau's philosophy. It would perhaps be nearer the truth to say that the keynote is, "Back to nature," or, "Let nature be the guide in the education of the child, especially the child's own inner nature." Rousseau would give the child unstinted contact with nature, and permit him to do spontaneously whatever his own nature prompts him to do. He would afford the young child abundant opportunity for observation and for muscular activity. He would stimulate the child's curiosity, encourage him to discover for himself what would satisfy him, and permit him to construct such things as his fancy suggested. "At the age of twelve Émile will hardly know what a book is." He objected to all attempts to coerce the child's attention; he protested against having children memorize things they have no interest in; he would have Émile learn from his own experiences what is right and what is wrong. He objected to religious instruction before adolescence; and then it was to be in the form of contact with nature, not sectarian training. Above all things he hated the social conventionalities of his times. His reaction against these, together with his own sentimentality, sometimes led him to absurd extremes. Émile is to be bothered with neither medicine nor doctors. "The only habit which the child should be allowed to form is to contract no habit whatsoever." By scanty clothing Émile is to be hardened to heat and cold. Let him learn by natural

consequences ; if he lies, pretend not to believe him ; if he pulls up the gardener's plants, let the gardener pull up his. As he grows older let him fall into the hands of sharpers, and suffer the consequences. But perhaps the most absurd of all his theories was that children up to the age of twelve should be kept so far as possible away from all social contacts.

Rousseau's ideas of the education of women appear to have been entirely colored by his own times and character. He wrote : " The whole education of women ought to be relative to men. To please them, to be useful to them, to make themselves loved and honored by them, to educate them when young, to care for them when grown, to counsel them, to console them, to make life agreeable and sweet to them — these are the duties of women at all times, and what should be taught them from infancy."

Naturalism the Keynote of Rousseau's Message. — It is a little puzzling to understand how such a strange mixture of sense and absurdity could exert so profound an influence upon education, and, through education, upon society at large ; especially when advocated by a person who, by exemplifying the principles of his own teachings, repudiated all the essential responsibilities of civilized society. The absurdity is reduced, however, as soon as we recognize clearly the ambiguity of Rousseau himself. He was not clear as to what he meant by nature ; whether the outside world, or the instinctive tendencies of the child's inner nature.

The fact is Rousseau himself "saw men as trees walking." It was as if he did not quite succeed in saying what he was trying to say. Those who came after him saw what it was. Interpreted by them his naturalism meant bringing education back to the nature of the child. Thus clarified, his fundamental principle was this: *Education should be adapted to the instinctive needs of the child at the various stages of the child's development.* This was the core of Rousseau's contribution. But there was still another reason for Rousseau's ambiguities. He did not understand children. He had no practical knowledge of what the different stages of their development really are, nor what sort of treatment really is adapted to their needs at those various ages. Hence most of his specific advice was absurd. Nevertheless it was something to have suggested that the child is a developing creature and should be treated accordingly, even though the second anointment came to the eyes of his followers, but never to his.

Basedow (Bah'ze-dō) was the first to attempt the actual conduct of schools according to Rousseau's theories. For a few years following 1771 he conducted a model school, which he called a Philanthropinum, at Dessau; but he was neither temperamentally nor intellectually adapted to the task. This institution, and others like it in Germany, became the fad of the hour, but they made no permanent contribution to education. When Rousseau died in 1778

nothing had as yet been done to extract his fundamental principles from the vagueness and ambiguity in which he expressed them, and to apply them to actual practice.

Rousseau's Disciples. — Rousseau's influence was transmitted principally through the work of Pestalozzi, Herbart, and Froebel. These three great reformers were all, as we shall see, disciples of Rousseau. They reduced his nebulous theories to definite principles, corrected, or rather contradicted, some of his worst absurdities (such as the theory that children should be reared in isolation), and showed how to make practical application of his positive suggestions. These men will be studied in due season. The student must bear constantly in mind their dependence upon Rousseau, otherwise the latter's contribution will not be appreciated.

Dewey Quotes Rousseau. — One of the most popular and influential books in the field of education that has appeared in ten years is "Schools of To-morrow," by John Dewey and his daughter Evelyn. The following quotations from Rousseau are transcribed from the first chapter of Dewey's book. (See pp. 268 ff.)

"A man must indeed know many things which seem useless to a child. Must the child learn, can he learn, all that the man must know? Try to teach a child what is of use to him as a child, and you will find that it takes all his time. Why urge him to the studies of an age he may never reach, to the neglect of those studies which meet his present

needs? But, you ask, will it not be too late to learn what he ought to know when the time comes to use it? I cannot tell. But this I know; it is impossible to teach it sooner, for our real teachers are experience and emotion, and adult man will never learn what befits him except under his own conditions. A child knows he must become a man; all the ideas he may have as to man's estate are so many opportunities for his instruction, but he should remain in complete ignorance of those ideas that are beyond his grasp. My whole book is one continued argument in support of this fundamental principle of education."

"The greatest, the most important, the most useful rule of education is: Do not save time, but lose it. If the infant sprang at one bound from its mother's breast to the age of reason, the present education would be quite suitable; but its natural growth calls for quite a different training."

"The whole of our present method is cruel, for it consists in sacrificing the present to the remote and uncertain future. I hear from afar the shouts of the false wisdom that is ever dragging us on, counting the present as nothing, and breathlessly pursuing a future that flies as we pursue; a false wisdom that takes us away from the only place we ever have and never takes us anywhere else."

"Hold childhood in reverence, and do not be in any hurry to judge it for good or ill. Give nature time to work before you take upon yourself her business, lest you interfere with her dealings. You assert that you know the value of time and are afraid to waste it. You fail to perceive that it is a greater waste of time to use it ill than to do nothing, and that a child ill taught is further from excellence than a child who has learned nothing at all. You are afraid to see him spending his early years doing nothing. What! Is it nothing to be happy, nothing to jump and run all day? He will never be so busy again all his life long. What would

you think of a man who refused to sleep lest he should waste part of his life?"

"Nature would have children be children before they are men. If we try to invert this order we shall produce a forced fruit, immature and flavorless, fruit that rots before it can ripen. Childhood has its own ways of thinking, seeing, and feeling."

"Physical exercise teaches us to use our strength, to perceive the relation between our own and neighboring bodies, to use natural tools which are within our reach and adapted to our senses. At eighteen we are taught in our schools the use of the lever; every village boy of twelve knows how to use a lever better than the cleverest mechanician in the academy. The lessons the scholars give one another on the playground are worth a hundredfold more than what they learn in the classroom. Watch a cat when she first comes into a room. She goes from place to place; she sniffs about and examines everything. She is not still for a moment. It is the same with a child when he begins to walk and enters, as it were, the room of the world about him. Both use sight, and the child uses his hands as the cat her nose."

"Before you can get an art, you must first get your tools; and if you are to make good use of your tools, they must be fashioned sufficiently strong to stand use. To learn to think, we must accordingly exercise our limbs, our senses, and our bodily organs, for these are the tools of intellect. To get the best use of these tools, the body that supplies us with these tools must be kept strong and healthy. Not only is it a mistake that true reason is developed apart from the body, but it is a good bodily constitution that makes the workings of the mind easy and correct."

"The first meaningless phrase, the first thing taken for granted on the authority of another without the pupil's

seeing its meaning for himself, is the beginning of the ruin of judgment." "What would you have him think about, when you do all the thinking for him?" "You then complete the task of discrediting reason in his mind by making him use such reason as he has upon the things which seem of the least use to him."

These quotations will give the student a vivid notion of Rousseau's ideas and style of expression; they also show the vitality and present influence of Rousseau's theories, and they reveal, in the third place, the kinship between Rousseau and the tendency in contemporary pedagogy of which John Dewey is the chief spokesman.

Rousseau the Mouthpiece of Democracy. — Rousseau's theories had no very immediate effect upon educational practice. But in the long run their influence has been immense, indeed, quite revolutionary. Gradually, ever since Rousseau's time, education has been adapted more and more to the natural needs of the child. Perhaps it could hardly be contended that this more natural education was the cause that produced a more natural, just, and democratic organization of society; but certainly such an education is necessary to the perpetuation of such a society now that we have it. If the "Émile" did not overthrow the old régime and create democracy, at least it has greatly helped the new democracy to learn that it cannot succeed unless it gives every child an education suited to his nature. It is possible, however, to overestimate the mere personal influence of Rousseau himself. He

was, so to speak, the mouthpiece of his times. He expressed what all people were coming to feel, because of the rising demand the world over for democracy. It is quite conceivable, indeed quite probable, that the growing democracy of the nineteenth century would have brought about many of the changes that have occurred had there been no Rousseau. Still the fact remains that Rousseau exerted an immense influence upon the growth of that democracy itself.

CHAPTER III

THE PERIOD OF NATIONALIZATION, 1776-1835

Educational Ideals of the Early Statesmen. — The statesmen that directed the affairs of our country during its formative period were well aware that popular education was necessary to the success of the republic they had established. Before the Revolutionary War Franklin's lively interest in educational progress had helped to lay the foundations of what is now the University of Pennsylvania. Washington wrote in 1790: "Knowledge is in every country the surest basis of public happiness. In one in which the measures of government receive their impression so immediately as in ours, from the sense of the community, it is proportionally essential." James Madison also wrote: "A popular government without popular information, or the means of acquiring it, is but a prologue to a farce or a tragedy or perhaps both." "The best service that can be rendered to a country, next to giving it liberty, is in diffusing the mental improvement equally essential to the preservation and enjoyment of that blessing." About the same time Jefferson wrote: "It is an axiom in my mind that our liberty can never be safe but in the hands of the people them-

selves, and that, too, of the people with a certain degree of instruction. This is the business of the state to effect, and on a general plan." Jefferson drafted a system of universal public education, modeled after Plato's plan, and tried to get it adopted in Virginia. Graves describes Jefferson's plan as follows :

"His bill proposed to lay off all the counties into small districts five or six miles square, to be called 'hundreds.' Each hundred was to establish at its own expense an elementary school, to which every citizen should be entitled to send his children free for three years, and for as much longer as he would pay. The leading pupil in each school was to be selected annually by a school visitor and sent to one of the twenty 'grammar' [*i.e.* secondary] schools, which were to be erected in various parts of the state. After a trial of two years had been made of these boys, the leader in each grammar school was to be selected and given a complete secondary course of six years, and the rest dismissed. At the end of this six-year course, the lower half of the geniuses thus determined were to be retained as teachers in the grammar school, while the upper half were to be supported from the public treasury for three years at the College of William and Mary which was to be greatly expanded in control and scope."

The student should remember that Jefferson's system never existed anywhere except on paper. It illustrates, however, the educational insight of the political leaders. These leaders clearly saw that, if the people are to control the government by their votes, they must at least be able to read, so that they can inform themselves

on the subjects they have to vote about. This, it will be observed, was quite different from the religious motives that had induced the early New Englanders to found schools. The idea that a self-governing people must not be illiterate produced remarkable results in the generation immediately following the Revolution.

The Educational Transition. — From the Revolutionary War to 1835 was a period of remarkable change in education. At the beginning of the period schools were of the colonial type, practically the same, except for the partial change from church to state support and control in New England, as had been imported originally from England. But by the close of the period a system of typically American schools had been established, or at least was getting well started, in all the northern states. By a typically American system we mean, of course, elementary schools, controlled by the state, supported by taxes, and free to all children. A sentiment in favor of education "was so general that the memorable saying of Chancellor Kent, that 'the parent who sends his son into the world uneducated defrauds the community of a youthful citizen, and bequeaths to it a nuisance,' was not more personal opinion than a widespread public faith." It was to bear fruit in the next period.

The New Nationalism. — This remarkable transition in education was one of the fruits of the new nationalism that characterized the period. Our young republic had got securely on her own feet as an independent

nation. She had fought and won the War of Independence, and achieved a permanent union of the states. The War of 1812 established her sovereignty beyond question. The Monroe Doctrine was promulgated; henceforth all the world knew that the United States was to be counted among the family of nations. That fact reacted upon the national consciousness of the American people themselves. It was a time also of rapid western expansion; Florida and the Louisiana purchase increased our area to five times that of the original thirteen colonies. Population trebled. Millions of pioneers crossed the mountains; by the end of the period settlement had extended to the Mississippi, and somewhat beyond. This expansion helped to create the impression in the minds of Americans that their nation was destined to become really great. The West developed democratic ideas that reacted upon the East, gradually removing property qualifications for voting. This change naturally emphasized the importance of educational qualifications. Manufacturing and commerce increased by leaps and bounds after the War of 1812, so that America ceased to be dependent upon Europe for shipping and for finished products. Internal improvements developed rapidly; by 1830 there were twenty-five canals. Washington Irving gave American authorship a recognized place in the literature of the English language. There occurred also a marked quickening in religious life; certain types of religious expression peculiar to America

were developed; the pioneer West was evangelized, and foreign missions were begun.

The New School System. — Thus in all phases of her life America was developing independence. Among the distinctively American institutions of which the foundations were laid in this period perhaps the most important was the American school. The process was a slow one, in the course of which there were many un-American experiments and much blind discussion, varying in different parts of the country. The goal was approached by a meandering, rather than by a straight, line. For that reason the details of the history are confusing to the student now. But the details will all fall into line if the student will remember that there was really emerging out of apparent chaos a system of free public schools, suitable to the aims and ideals of the new nation. It is the task of this chapter to trace that development through a study of typical cases.

The Rise of a Free School System in New York State. — New England inherited from colonial times, as we have seen, a state system of public schools of the type that we now recognize as characteristically American. So far as the organization of schools was concerned (*i.e.* the arrangements by which the government controlled and supported them) she had no important changes to make. During this period the district system, which previously had been a matter of custom only, was sanctioned and stabilized by law. She also

made some improvement in the quality of her schools, but that will be described later.

It was the New England system that gradually spread to other parts of the country. Naturally it took root in the states where New Englanders had settled. This was true of certain parts of New York state (outside of New York City); and so it is there that we first find the New England system appearing. Immediately after the Revolution, before 1800, New York set apart both land and money to create a state fund for the aid of elementary education. These funds were distributed to townships upon condition that they raise funds by local taxation for the support of their schools. This was the first instance of state aid; and thus was set a very important precedent. The townships gradually responded to the offer. By 1820 local taxes and state aid for the support of schools had become quite common in rural New York. The rate-bills (cf. p. 6) still remained, however.

In New York City. — New York City entered the period of Nationalization under the handicap of European ideals and customs. She had imported the aristocratic type of school organization (see pp. 2, 9), whereby those members of society who could afford to do so provided education for their own children, while the children of the poor remained ignorant. Education of the poor on a charity basis was the logical corollary of this system. England during the eighteenth century had utilized private philanthropic

societies for the extension of education to the poor. The most conspicuous of these were the Society for the Promotion of Christian Knowledge (commonly referred to as the "S. P. C. K.") and the Society for the Propagation of the Gospel ("S. P. G.").

New York City had been the special victim of the missionary activity of the "S. P. G." New York thus acquired the idea of financing and administering education on a charity basis ; so when some leading citizens began to realize the necessity for educating the neglected poor in New York City, they attacked the problem by organizing, after the British model, the Free School Society. That was in 1805. The business of the Society was to solicit funds and use them to conduct charity schools for boys who could not afford to pay tuitions. Besides gifts from private individuals, the Society solicited and received contributions from both the city and the state governments. In 1828 the Society received some funds from local taxes also. At one time it charged tuitions, but this was presently abandoned. The peculiar feature of this arrangement should be carefully noted : funds derived from state grants and local taxes, together with the responsibility for conducting schools, were turned over to a private philanthropic organization, which depended in part upon subscriptions also.

This "charity" plan of organizing schools was entirely un-American in spirit and method. Its abolition came about in this way. First the Baptist Church and

then the Roman Catholic Church made a plea for state appropriations for their schools on the ground that they had an equal claim upon them with the Society. A hot debate followed, in which the churches participated. The matter was finally settled by the legislature in 1842 — we may as well tell it here, though it did not happen till after the close of this period — by creating a city board of education and refusing further funds to either Society or churches. In this way New York City was belated in the establishment of a truly American system of public schools. Indeed, she has never entirely recovered from the handicap, as much of her elementary education to this day is on a private basis. Societies like the Free School Society were by no means uncommon throughout the country during the period of Nationalization.

In Pennsylvania. — It seems as if the farther south we go the more deeply rooted was the idea that education, except for the well to do, was a charity. In Pennsylvania and all the states to the south there existed an institution known as the pauper-school. This institution had been in use before the Revolution, and it persisted throughout the entire period under discussion. The Pennsylvania law of 1802 was typical. This law authorized the overseers of the poor to pay the tuition in some private school of children whose parents would declare themselves to be paupers. Funds for this purpose were assessed, levied, and collected in the same way as other taxes for poor relief. This put edu-

cation upon the basis of a public charity, which was even more degrading than the private charity plan of New York City. The arrangement was unsatisfactory to all concerned. The rich objected to associating with paupers; the poor, resenting the humiliation, preferred their children to grow up in illiteracy; and an utterly undemocratic theory of education was inculcated.

The more progressive leaders discerned the need of something better. Accordingly in 1814 "The Society for the Promotion of a Rational System of Education" was organized in Philadelphia. It was typical of many societies organized during the period for purposes of educational propaganda. As a result of its efforts a law was enacted by the state legislature in 1818 which permitted Philadelphia to organize itself as a school district for the purpose of providing public schools. A little later four other cities secured similar privileges. The remainder of the state retained the pauper-school system for many years.

In 1834 Pennsylvania passed a law that for her was epoch-making, although it was similar to the plan that New York state had had in operation for a generation. By this law a state fund was created to be distributed to such local communities as would organize themselves as school districts and support their schools by local taxes. Strange as it may seem to us now there was a great deal of opposition to this arrangement. The Quakers and the "Pennsylvania Dutch" opposed it

because they foresaw that their parochial schools would be replaced. The wealthy classes opposed it, arguing that it was undemocratic to tax them for the schooling of other people's children. Northern Pennsylvania, which was settled mostly by New Englanders, readily adopted the new plan, but the older portions of the state were very slow in accepting it. It did not become universal till toward the close of the next period, and will accordingly be referred to again in a later chapter (pp. 138 ff.).

In the South. — Virginia, which may be taken as typical of the whole South, was even more devoted to the charity theory of education than were the New Yorkers and the Pennsylvanians. If Jefferson could have had his way a fairly effective system would have been launched from the start. But all that came of his efforts was a permissive law by which the justices of each county were permitted to initiate a system of schools supported by taxation. As a rule there were no more confirmed aristocrats in the country than the justices; as a matter of course, they were quite indifferent to public education, and, accordingly, nothing whatsoever came out of the permissive law.

In addition to the time-honored private schools of the wealthy, and occasional denominational schools, so-called field schools were not uncommon during the period under discussion. They were part and parcel of the old colonial system of education under family

auspices, being maintained by several neighboring families in coöperation. They were supported by tuition, or, like churches, by subscriptions. These schools were supplemented by pauper-schools. After 1818 a state fund existed in Virginia to supplement county support of pauper-schools, thus putting education strictly on the un-American basis of a public charity. On this basis it continued not only during this period, but for most of the next as well.

In the West. — As the Northwest Territory was settled, people brought with them the notions of education they had been familiar with at home. Consequently each and every one of the plans discussed above and in Chapter I was transplanted into this new territory, there to struggle for existence with all the others. In general, Michigan and the northern parts of Ohio, Indiana, and Illinois were settled by New Englanders and New Yorkers. The southern parts of Ohio, Indiana, and Illinois, together with Kentucky, were settled by Virginians. Pioneers from the Middle States were generously sprinkled throughout the region. Michigan, having the largest proportion of New Englanders, was the first of these new states to establish a public school system; the other states lagged, and even by the close of this period (1835) the New England system had by no means won a final victory. Even when it did it carried the degenerate district unit. In the course of the long struggle, and the slow education of public opinion, many strange things

occurred. At one time Indiana passed a law providing that "no person should be liable for a tax who does not, or does not wish to, participate in the benefit of the school fund." One member of the General Assembly orated as follows: "When I die, I want my epitaph written: 'Here lies an enemy of free schools.'"

The Tragedy of Blindness to the Signs of the Times.

— It is interesting to note how blind most of the people and many of the leaders of this period were to the tendency of the times; and how utterly unable they were to understand the needs of democracy, or to foresee what it was predestined to bring forth. As we look back now it is hard for us to understand or excuse that blindness. And yet there is much similar blindness to-day relative to the present problems of education. One reason why teachers should study the history of education is, that they, at least, may be able to see clearly what the present tendencies in educational development are really pointing toward.

The reader must have observed how reluctant legislatures and popular majorities were to coerce the unwilling. The Pennsylvania law of 1834 is a case in point; others were mentioned. Our fathers certainly established a precedent in favor of educational progress by agitation and persuasion instead of mandatory legislation. In such matters as attendance, building and equipment, consolidation, medical inspection, etc., may we not in our day do better to make use of such mandatory laws as educational leaders

can induce legislatures and popular majorities to enact?

Textbooks and Methods. — The narrow curriculum and wasteful methods described in Chapter I carried over into the Period of Nationalization; but during that period many changes were made for the better. Webster's Spelling Book, entitled the "Institutes of the English Language," but popularly known for more than a century as the "Blue-backed Speller," — appeared immediately after the Revolution. It replaced the old primers, and was universally used for many years. The speller contained long lists of words like the five short lists in the New England Primer, but they were interspersed with reading matter. The religious matter of the primer was replaced by a variety of material, and a moral catechism took the place of the Westminster Catechism. This widely used book contributed materially to the standardization of English spelling; before, indeed, one could take one's choice as to the spelling of words. Spelling was perhaps the most important exercise in the lower schools, and spelling matches became popular social gatherings, — the great events of the villages and rural life. This interest in spelling continued throughout the century.

Other subjects also developed largely through the influence of popular textbooks. Pike's Elementary Arithmetic appeared in 1793, and was extensively used. Morse's Geography was published about the same time. It was very different from a modern geography, how-

ever, containing much historical material. The edition of 1788, for example, presented a short "account of the transactions of the United States, after the Revolution," written by Noah Webster. In the schools the text in geography was used much as we use the readers to-day. Warren Colburn's *First Lessons in Arithmetic on the Plan of Pestalozzi* (see Chap. IV) was published in 1821. Colburn in the first part of this book emphasized Pestalozzi's idea of imparting number ideas to children by the use of objects which they could count. After that the pupil practiced mental computation, without the use of figures. Later he was introduced to the manipulation of figures. Parker ranks this book with the *New England Primer* and Webster's *Spelling Book* in importance; its influence, however, did not begin until near the close of the period under discussion. Notwithstanding the introduction of these new textbooks, the elementary curriculum remained very narrow. It consisted almost entirely of "the three R's" (readin', 'ritin', and 'rithmetic). Geography, history, and grammar did not appear as subjects in most of the schools until after 1835.

Children were taught to read in "the good old-fashioned way." The little children were called up to the teacher one by one. The teacher held the book on his knee, upside down, so it would be right side up to the child. Then he pointed out the letters to the pupil, the capitals first, naming them. Next he reviewed, by pointing to a letter he had named before, saying:

“What’s that?” If the pupil guessed right, well and good; if not he was told again. In this way some children “learned their letters” in two or three weeks; others worked all summer on them and then did not know them. After most of the letters had been learned the child was taught to spell out and recognize short words. Finally short sentences were introduced, as “The cat sees the dog”; “The dog can see the cat,” etc. This utterly unpsychological method continued in use till almost the close of the last century, and is employed in backward places to this day.

The following report of the visiting committee of the Massachusetts town of Taunton gives a vivid picture of the schools of the period. It is taken from Judd’s “The Scientific Study of Education,” and he quotes it from a recent report of the superintendent of the Taunton schools. Judd comments that the terms must have been shorter, the teaching poorer, and the supervision less in more rural towns.

“The committee chosen by the town to inspect the schools beg leave to report their situation and examination.

“January 6th, 1801. Your committee visited a school kept in Rueben Richmond’s house instructed by Mrs. Nabby Williams of 32 scholars. This school appeared in an uncultivated state the greater part of the scholars.

“On the 26 of Feb., visited Mrs. Nabby Williams’ school the second time and found that the scholars had made great proficiency in reading, spelling, writing and some in the grammar of the English language.

“Nov. 10th, the committee visited and examined two

Schools just opened; one kept in a school house, near Baylies works, of the number of 40 scholars, instructed by Mr. Philip Lee. This School we found to have made but small proficiency in reading, spelling and writing, and to be kept only six or seven weeks; upon inquiry why it should be taught no longer, we were informed that the ratio of school money for this School was and had been usually expended in paying the Master both for his service and board, and in purchasing the fire wood which is contrary to the usual custom of the town.

"The other School, visited the same day, was kept near John Reed's consisting of the number of between 30 and 40 scholars instructed by Mr. William Reed; This School, being formed into regular classes, appeared to have made a good and pleasing proficiency in reading, spelling and writing, some in arithmetic and others in the Grammar of the English language. This School's share of school money is expended to pay the Master for his service only, so that the School will be continued three months.

"On the 8th day of December they visited a School kept in a School house near Seth Hodges, in number 30 scholars instructed by Mr. John Dunbar. This School appeared in a good way of learning, and to be kept four months.

"On the 22nd of December your Committee visited two more Schools just opened, one in a School house near Samuel Pett's of the number of 40 scholars instructed by Mr. Rufus Dean, and to be kept three months. This School appeared to be in a promising way of learning in reading, spelling and writing and to be regularly taught.

"The other School is kept in the home of Mr. Paul Chase and taught by Mr. Nicolas Stephens, consisting of 30 Scholars, and appears quite in a good way of learning especially in Spelling for scarcely a word passed a scholar

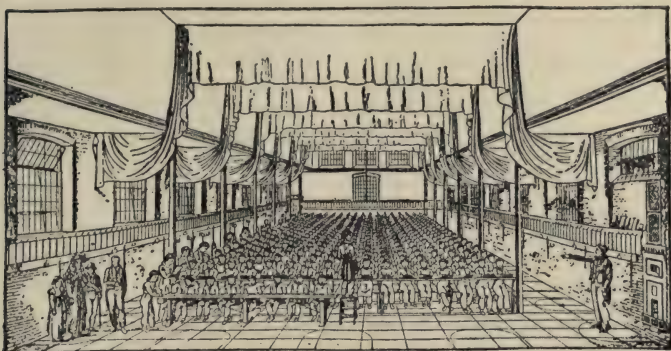
misspelled, in writing some did very well and others in arithmetic appeared attentive.

"January 8th, 1801 visited two Schools for the first time, one in the home of Mr. William Hodges of the number of 37 Scholars, instructed by Mr. Lovet Tisdale, the other in the home of Mr. Daniel Burt, of the number of 25 Scholars, instructed by Mr. Benjamin Tubbs. These Schools appeared in good order and attentive to their learning.

"Feby. 26th, visited Mr. Dean's School 2 time, the Scholars were crowded into a small room, the air was exceedingly noxious. Many children were obliged to tarry at home for want of room and though the school was kept only a few weeks they were deprived of its advantages. A want of books was the complaint. The committee were anxiously desirous that this evil might have a remedy and were of opinion it may be easily done. The Scholars appeared to increase in knowledge & claim our approbation.

"March 5th, visited two schools, one kept at Mr. Aaron Pratt's of the number of 30 scholars instructed by Mr. Philip Drown. This school appeared quite unimproved and uncultivated, in reading and spelling, some of them did better in writing. This uncultivated state did not appear to be from a fault in the children but, as your committee were informed, from the disadvantage of having had masters illegally qualified for their instruction; of which class is their present master unauthorized by law."

The Monitorial System. — The first reaction from the old, individual method of instruction came with the introduction of the Lancasterian, or Monitorial, system, from England, soon after the War of 1812. This system enabled one teacher to handle a large number of children at small expense, and seemed, therefore, a



A MONITORIAL SCHOOL, WITH THREE HUNDRED PUPILS AND BUT ONE TEACHER



PUPILS RECITING TO MONITORS



MONITOR INSPECTING SLATES

“blessing from heaven.” Parker states that Philadelphia in 1819 had ten such schools, with one teacher in each, and an average of 284 pupils per teacher. According to this system the details of schoolroom routine were reduced to military precision, the teacher himself taught the older pupils in the most formal fashion, and they, as “monitors,” taught the younger pupils. This plan was in great favor for fifteen or twenty years; but its inadequacy was eventually recognized, and it gave place to something better. But meantime it helped to habituate the taxpayers to a more liberal support of their schools. This influence is suggested in the following quotation from Governor Walcott’s message to the Connecticut legislature in 1825.

“If funds can be obtained to defray the expenses of the necessary preparations, I have no doubt that schools on the Lancastrian model ought, as soon as possible, to be established in several parts of this state. Wherever from 200 to 1000 children can be convened within a suitable distance, this mode of instruction in every branch of reading, speaking, penmanship, arithmetic, and bookkeeping, will be found much more efficient, direct, and economical.”¹

For the most part these Lancasterian schools were used only in the cities. Boston in 1800 was a city of 25,000, New York of 60,000, and Philadelphia of 70,000. At this time the annual expenditure for instruction for each pupil must have been very small. No figures are known, but in 1822 the Free School

¹ Cubberley’s “Public Education in the United States,” p. 95.

Society spent on the average \$1.37 for each pupil each year. But it soon became apparent that such schools were not good enough. The monitorial scheme was abandoned within a generation.

The Primary School. — The dame school was inherited from colonial times (see pp. 9, 10). The practice was common, especially in the New England cities, of admitting to the public schools only children who had already learned to read. Dame schools accordingly were preparatory to the public and private schools. Many children were taught to read by their mothers. From this fact came the traditional custom of mothers teaching their children to read before sending them to school. Many middle-aged people now living were so taught; and to this day some mothers assume the responsibility.

About 1820, however, there was imported to this country the English "infant-school." Beginning with Boston, a number of cities organized infant or primary schools, partly at public expense. Children were received at about four years of age, and were prepared for the ordinary schools. Eventually these infant-schools became a recognized part of the developing public school system, which thereupon consisted of the primary and intermediate, or "grammar," schools. For years these two schools were held in separate buildings. Thus was the first step taken in the direction of our present graded system. These new primary schools were taught by women; a movement which greatly stimulated the more general employment of

women as teachers. With the rise of primary schools the old-fashioned dame school passed away.

Colleges. — Boone lists twenty-four colleges established before 1800, of which sixteen had been founded since 1776. Of the universities and colleges of the United States listed in the *World Almanac* some seventy-five were in existence in 1835. Doubtless many of them were mere academies at that early date.

The curriculums¹ of the colleges were slowly modified during the Period of Nationalization. Before 1800 chemistry had begun to be taught at the leading colleges in connection with medicine. By 1810 it had become a separate chair; but the laboratories were used only by the professors. Geology was introduced as a separate subject at Williams in 1825. Several primitive telescopes were installed before 1835. Eaton lectured on botany at Williams in 1810. Chairs for the study of the French and German languages were established in most of the colleges prior to 1825, but no attention was given to their literatures. It must be remembered, however, that these were only beginnings; the classics still dominated the collegiate programs. It is interesting to note that after the Revolution students at Yale were catalogued alphabetically, and not according to the social rank of their families, as formerly. The first Greek letter fraternity, Phi Beta Kappa, was founded at William and Mary College in 1776.

¹ The dictionaries all allow the English plural, and Webster's prefers it. This form seems more consistent with the educational ideals set forth in this book.

The Academies. — During this period a very significant change occurred in the character of the secondary, or college preparatory schools. The old Latin-grammar schools gave place to the academies. The first of these was founded in Philadelphia by Franklin in 1749. It later grew into the University of Pennsylvania. Some of the famous old academies, — Phillips Exeter in New Hampshire, Phillips Andover in Massachusetts, Bethlehem and Nazareth in Pennsylvania, and German-town Academy in Maryland, — appeared just before or just after the Revolution. By the close of the Nationalization Period there was a considerable number of these academies, though of course, they were by no means so numerous in proportion to the population as the modern high schools are now.¹

	To 1800	1801-1820	1821-1840	1841-1860	1861-1880
Maine	5	20	31	34	8
New Hampshire . .	10	18	59	23	25
Vermont	10	24	22	10	9
Massachusetts . .	17	19	78	40	15 <i>a</i>
New York	19	33	176	183	123 <i>b</i>
Maryland	5	24	40	23	
North Carolina . .	30	113	43 <i>c</i>		
Georgia	6	14			
Total	102	265	449	313	180

a closes with 1877. *b* closes with 1873. *c* closes with 1825.

¹The above table from Dexter's "History of Education in the United States," p. 94, shows the number of new academies in a few typical states at different dates. It gives an idea of the growth and decline of this institution.

The academies met two needs: Some of them were "fitting" schools, preparing boys for college. These were usually fairly well endowed institutions, and the towns in which they were located came to be regarded as educational centers. There were many academies, however, that were merely local, secondary schools, catering chiefly to those who never expected to go to college, and sometimes referred to as "finishing" schools. These were usually less pretentious institutions; pupils entered at the age of nine or ten, the program of studies consisted of the common branches, and discipline was severe. Some academies offered both "fitting" and "finishing" programs, usually through two curriculums, the classical and the Latin-scientific. The academies were private institutions, supported partly by tuitions, and partly by endowments and contributions. In some states, notably Massachusetts, the state granted lands to the academies, thus tacitly recognizing them as a part of the public-school system. This policy may have postponed somewhat the rise of the public high school. Nevertheless the significance of the academies for our growing democracy was immense, and lay in the fact that they were the first step toward universal secondary education, which we must see consummated in the present generation. Begun during this period, they had their greatest influence in the next period; after the Civil War, as we shall see, they began to be superseded by the modern high schools.

Education Abroad. — During the period under discussion Germany possessed the best system of public schools of any country in the world. As a matter of fact she had two systems, one for the aristocratic, or ruling, classes, and an entirely separate system for the common people, — an arrangement which continues generally throughout European countries to the present time. The “Gymnasium” was the core of the aristocratic system. This was a secondary school, with a course extending through nine or ten years. Boys entered it at the age of nine or ten, having received their elementary preparation at private schools. The curriculum consisted of Latin, Greek, and mathematics and prepared for the university. Support was chiefly from tuitions. The German gymnasium dates from the sixteenth century. It is still the most important of the German secondary schools for the upper classes.

The people’s schools (*Volkschulen*) received the children of the lower classes at the age of about six or seven, and gave them an eight-year course quite similar to that of our first eight grades. But it did not teach the subjects required for entrance to the higher schools, hence it disqualified the peasant children for higher education. This system of public schools was already well organized, supported, and supervised at the beginning of the nineteenth century. Elementary education was practically free, universal, and compulsory. Germany was far ahead of any of the other nations in this respect. The existence of this system was due

to the foresight of the Hohenzöllern kings, especially Frederick the Great. The Pestalozzian methods were adopted in the Prussian schools before 1825, so that Germany had the best schools in the world, not only in organization but in methods of instruction as well.

England also had a good system of secondary schools and colleges for her aristocratic classes. Her secondary schools were private institutions, known collectively as "the great Public Schools." Their program of studies was quite like that of the German gymnasium. Although these secondary schools had been in existence for several centuries, the elementary education of the masses was grossly neglected. Indeed, what was furnished them was entirely on a charity basis. The S. P. C. K. had been active during the eighteenth century (cf. p. 44). At the beginning of the nineteenth century it was superseded by two new societies, the National Society and the British and Foreign Society. These societies conducted charity schools on the monitorial plan. The course of study was very meager, the methods were bad, and the schools reached only a fraction of the people. A few leaders saw that the extension of the franchise then being made required popular education. "We must educate our new masters," declared one statesman. But the old theories resisted this new movement, and England did practically nothing toward a truly democratic system of free public schools till long after 1835. Neither did France. Thus the schools of Europe continued to reflect the

caste organization of society, secondary and higher schools all being private, and patronized only by the aristocratic classes, while schools for the masses were rudimentary, insufficient, and on a charity basis, except in Germany, and even there, while some instruction was provided for all, the organization of the schools was explicitly directed toward a perpetuation of the older social order. "Equality of opportunity" as an educational ideal was far in the future.

CHAPTER IV

PESTALOZZI

The Historic Background. — In Europe the period we have just been discussing (1776–1835) was marked by the Industrial Revolution in England, and, on the continent, by the French Revolution, the Napoleonic wars, and the reconstruction following the Congress of Vienna. It was a period characterized chiefly by democratic aspirations and struggles, due partly to the influence of our own successful fight for liberty. In the realm of the intellect this craving of the human spirit for liberty, achievement, and self-realization produced in Germany a group of brilliant philosophers and poets, — Kant, Goethe, Schiller, Schelling, Schleiermacher, Hegel, Fichte, and others; and in the field of education three outstanding figures, — Pestalozzi, Herbart, and Froebel. This was the golden age of German genius, when German thought life was aspiring to a great freedom, and long before the stifling pressure of German imperial ambition had begun to take effect. This was the spiritual Germany to which the world owes so much; and a revival of which, let us hope, the downfall of German autocracy will bring about. Pestalozzi, Herbart, and Froebel were natural products

of such an age, and their influence upon educational theory and practice in both Europe and America has been immeasurable.

Early Life of Pestalozzi. — Johann Heinrich Pestalozzi was born in Zurich, Switzerland, in 1746. His father died when he was young, and he was reared by his devoted, pious mother, and by his maternal grandfather, who was a rural pastor. Due to these influences, and to what he saw in his grandfather's parish of the peasants and their deg-



JOHANN HEINRICH PESTALOZZI

radation, he conceived a desire to consecrate his life to the uplifting of the common people. This purpose was increased almost to fanaticism by his studies at the University of Zurich, where his mother, through self-sacrificing efforts, helped to maintain him. At that time the little University of Zurich contained in its faculty some of the most stimulating minds in all Europe, among the rest one Bodemer, a teacher of history and politics, "devoting especial attention to the history and institutions of Switzerland, and inspiring enthusiasm for justice, liberty, and the simple life." At about the same time Pestalozzi was deeply influenced by the writings of Rousseau.

The seriousness of his purpose to reform society is indicated by the letter he wrote to Anna Schulthess just before he married her.

“My dear friend, — I shall now reveal myself frankly to you, let you look as deeply into my soul as I am able to penetrate myself. I am improvident and incautious, and lack presence of mind in unexpected changes of prospect. I may not conceal these defects from the maiden I love, though I may in some measure overcome them. I am extreme in praise and blame, and in my likes and dislikes. I am negligent in matters of etiquette, and in all other matters of little consequence.

“I must also confess to you that I shall always subordinate the duty that I owe to my wife to the duty that I owe to my country. Though I shall be the tenderest of husbands I shall always consider it my duty to remain inexorable to the tears of my wife if she seeks with them to keep me from the performance of my duties as a citizen. My life will not pass without important and critical undertakings. No fear of man shall ever keep me from speaking, if my country’s need commands me to speak. I shall risk everything to alleviate the misery and need of my people.”

By this warning, however, the good woman was not dismayed; and she eventually paid the full measure of her pledge.

Pestalozzi’s first venture in life was as a minister; but he broke down in his trial sermon. Next he tried the law, hoping thereby to uplift the poor. Again he was a failure. Next he bought a piece of land, built a home on it, and undertook farming. By operating a sort of model farm, he hoped to show the peasants

what could be done in agriculture. The place he called "Neuhof" (*i.e.* new farm). This venture was a financial failure. So he turned the farm into a sort of industrial school, gathered together some fifty poor children of the neighborhood, and taught them reading, singing, religion, spinning, and farming. But the ungrateful dishonesty of the children's parents, together with Pestalozzi's incompetenc  as a manager, rendered this venture also a financial failure. At thirty-five years of age Pestalozzi had failed in everything that he had undertaken, wasted his wife's inheritance, and involved himself heavily in debt. The next fifteen or twenty years were a sad struggle with poverty, and left him with an abject sense of defeat.

"Leonard and Gertrude."—It was during these years that he wrote his "Leonard and Gertrude." This is an interesting story about a poor peasant family that lived in the village of Bonal. Gertrude is the heroine. By thrift and the careful instruction of her children she is able to reform her drinking husband, rear her children respectably, and lift her family out of poverty into relative prosperity. Seeing which, the neighbors secure Gertrude's like services for their own children; as a result, the whole village is reformed. The lesson which Pestalozzi meant to teach with this story was that education is the means by which the common people can be lifted out of their vice and misery. But the message was too advanced for that age; men looked to political revolution for their social salvation.

Hence the book, though it was very popular as a mere story, missed its mark; Pestalozzi's own generation did not see the point.

Nevertheless it was a great message, and especially remarkable coming as it did at that stage of the world's history. It was practically a new idea. Universal



PESTALOZZI AT STANZ

education had hardly been dreamed of. Time, however, was to increase its recognition.

In 1798, when Pestalozzi was fifty-two years of age, he received an appointment from the government to open a school for war orphans, in an unfinished convent at Stanz. Again he combined industrial training with ordinary teaching. Here he first made use of "object-teaching" in arithmetic, language, geography,

and natural history. But in less than a year the building was taken over by the French army to be used as a hospital.

Later Life of Pestalozzi. — But now he began to succeed. In 1800 he was able to open a private school in the old castle and castle gardens at Burgdorf. This school prospered from the start. Pestalozzi gathered about him a staff of kindred minded teachers. The Pestalozzian methods became famous and men interested in education visited the school, — among them an envoy from the Prussian King, whose influence upon his return we shall relate presently, and Herbart, who was himself to become a great educational reformer. In 1805, the castle being needed by the local government at Burgdorf, Pestalozzi removed to Yverdon (e'ver-don), where for twenty years he continued his institute with great success, enjoying even wider and more enthusiastic fame than at Burgdorf. Visitors, both curious and serious, came from all over Europe and from America; Pestalozzian institutes sprang up at various points throughout Europe; the kings of Prussia and Austria, when in the vicinity with their armies, honored him, one with the Russian cross and the other with a royal gift. Froebel (see p. 96) spent two years there studying the master's methods. Finally the Prussian government, due to the influence of Fichte and the envoy mentioned above, sent seventeen young teachers to Yverdon for three years (p. 82).

At last, however, Pestalozzi grew too old to dominate the institute himself, and jealousies broke out among his teachers, so that the real spirit of the institution disappeared. It finally broke up in 1825, and Pestalozzi spent the last two years of his life in poverty and sorrow. He had to sell his royal medals to buy bread, so wretchedly does the world often reward its greatest benefactors.

Pestalozzi's Pedagogical Principles. — Pestalozzi's contribution to the progress of education lay in the genius with which he applied Rousseau's fundamental principles of naturalism to actual schoolroom practice. The particular ideas for which Pestalozzi himself stands may be stated as follows :

1. The uplift of the masses through education.
2. Educational experimentation.
3. Industrial education.
4. Kindly discipline.
5. Objective teaching.
6. The analytical method.

The first of these has already been discussed, but the following quotations may not be superfluous :

"From my youth up I felt what a high and indispensable human duty it is to labor for the poor and miserable ; that he may attain to a consciousness of his own dignity through his feeling of the universal powers and endowments which he possesses awakened within him ; that he may not only learn to gabble over by rote the religious maxim that 'man is created in the image of God, and is bound to live and die as a child of God,' but may himself experience its truth by

virtue of the Divine power within him, so that he may be raised, not only above the ploughing oxen, but also above the man in purple and silk who lives unworthily of his high destiny."

"Why have I insisted so strongly on attention to early physical and intellectual education? Because I consider these as merely leading to a higher aim, to qualify the human being for the free and full use of all the faculties implanted by the Creator, and to direct all these faculties towards the perfection of the whole being of man, that he may be enabled to act in his peculiar station as an instrument of that All-wise and Almighty Power that has called him into life."

Educational Experimentation. — As to the second idea, Pestalozzi's entire career at Neuhof, Stanz, Burgdorf, and Yverdon constituted a series of educational experiments. Though not a scientist in the strict sense of the word, Pestalozzi's aim was quite in harmony with that of more recent experimental psychologists. He said, "I wish to psychologize education"; and his example has been widely followed. Many of our larger normal schools and teachers' colleges now conduct laboratories for educational research. Such problems as the following are typical: the project *vs.* the textbook method of teaching the various common branches; oral *vs.* written drill in spelling; spelling in columns *vs.* spelling in sentences; value of the diagram in teaching grammar; many unlike books *vs.* many copies of the same book in teaching reading; silent *vs.* oral reading; extrinsic *vs.* intrinsic motivation, and the like. The aim is, by keeping accurate

records and using standard tests in measuring results to get answers to these questions that are scientific, not mere eloquent opinion. While the modern teacher-training schools are not conscious disciples of Pestalozzi in their experimental work, nevertheless, Pestalozzi may be said to have originated the movement although his methods were empirical rather than scientific.

Industrial Training. — Pestalozzi believed that industrial training should be combined with ordinary



THE ENVIRONMENT OF PESTALOZZI

education. He practiced this combination at Neuhof and Stanz, and advocated it in "Leonard and Gertrude." At Burgdorf and Yverdon he had to abandon industrial training because the

aristocratic patrons of his school did not wish it for their children. The idea was taken up, however, by his wealthy friend Fellenberg, who for many years conducted a very successful industrial school at Hofwyl. Much later the same principle found expression in the continuation schools of Germany. These are part-time schools attended by children of the laboring classes after they have left the elementary school and gone to work at the age of fourteen. These schools try to furnish whatever the pupil needs to know to make him a

more intelligent worker. The Pestalozzian idea of industrial training has not been much utilized in America until very recently; and now the rise of industrial education is not due to Pestalozzi's influence but to the necessities of the times. We should do well, however, to recognize even to-day the validity and force of his conception of the matter. Industrial education in America will be discussed in the proper place (see pp. 243-250).

Kindly Discipline. — Rousseau taught that every human being has a right to be happy. That was a revolutionary idea in those days. Pestalozzi was the first to apply it to school discipline; and that was certainly a revolution in school practice. This movement was quite in harmony with the spirit of that age; for at about that time there occurred a marked increase in human sympathy, which revealed itself in the abolition of many of the brutal penalties to which criminals had been subjected. Pestalozzi advocated firm but loving discipline. Since his day the idea has been all too slowly applied. The old discipline described in Chapter I continued in American schools throughout the Period of Nationalization, indeed down almost to the close of the nineteenth century. But recently the example of Pestalozzi has taken effect, and schools are becoming places where children can be happy. Indeed there is some tendency to go to the opposite extreme and make discipline loving without being firm. This is sentimentality.

The Objective Method. — The most important of all Pestalozzi's contributions to educational practice was his observational, or objective, method of teaching. The following quotations state Pestalozzi's theory in his own words :

"Let these questions be short, clear, and intelligible. Let them not merely lead the child to repeat in the same, or in varied terms, what he has heard just before. Let them excite him to observe what is before him, to recollect what he has learned, and to master his little stock of knowledge for materials for an answer. Show him a certain quality in one thing, and let him find out the same in others. Tell him that the shape of a ball is called round, and if, accordingly, you bring him to point out other objects to which the same property belongs, you have employed him more usefully than by the most perfect discourse on roundity. In the one instance he would have had to listen and to recollect, in the other he has to observe and to think." "From observation and memory there is only one step to reflection. Though imperfect, this operation is often found among the early exercises of the infant mind. The powerful stimulus of inquisitiveness prompts to exertions which, if successful or encouraged by others, will lead to a habit of thought."

"Not only is there not one of the little incidents in the life of a child, in his amusements and recreations, in his relations, in his relation to his parents, and friends, and playmates ; but there is actually not anything within the reach of a child's attention, whether it belong to nature or to the employments and arts of life, that may not be made the object of a lesson by which some useful knowledge may be imparted, and, what is still more important, by

which the child may not be familiarized with the habit of thinking on what he sees, and speaking after he has thought. The mode of doing this is not by any means to talk much to a child, but to enter into conversation with a child; not to address to him many words, however familiar and well chosen, but to bring him to express himself on the subject; not to exhaust the subject, but to question the child about it, and to let him find out and correct the answers. It would be ridiculous to expect that the volatile spirits of a child could be brought to follow any lengthy explanations. The attention is deadened by long expositions, but roused by animated questions."

A good example of Pestalozzi's own application of this theory is quoted by Parker:¹

"The first elements of geography were taught us from the land itself. We were first taken to a narrow valley not far from Yverdon, where the river Buron runs. After taking a general view of the valley, we were made to examine the details, until we had obtained an exact and complete idea of it. We were then told to take some of the clay which lay in beds on one side of the valley, and fill the baskets which we had brought for the purpose. On our return to the Castle, we took our places at the long tables, and reproduced in relief the valley we had just studied, each one doing the part that had been allotted to him. In the course of the next few days more walks and more explorations, each day on higher ground, and each time with a further extension of our work. Only when our relief was finished were we shown the map, which by this means we did not see until we were in a position to understand it."

¹ S. C. Parker, "The History of Modern Elementary Education," p. 326.

In teaching arithmetic Pestalozzi took great pains to have children handle and count actual objects, so that they could acquire a definite idea of what the numbers meant. Otherwise the child, he wrote, forms

“the habit of associating no difference of meaning with the various names of numbers he pronounces. Why have I been so foolish as to let him pronounce important words without taking care at the same time to give him a clear idea of their meaning?”

He taught composition by showing his pupils objects, discussing their characteristics with them, encouraging their conversation, and then asking them to write about the objects. This is what Horace Mann (Chap. VI) thought of the method :

“Again, the method I have described necessarily leads to conversation, and conversation with an intelligent teacher secures several important objects. It brightens ideas before only dimly apprehended. It addresses itself to the various faculties of the mind, so that no one of them ever tires or is cloyed. It teaches the child to use language, to frame sentences, to select words which convey his whole meaning, to avoid those which convey either more or less than he intends to express ; in fine, it teaches him to seek for thoughts upon a subject, and then to find appropriate language in which to clothe them.”

There are instances on record that Pestalozzi carried this to absurd lengths, as when he had nothing else to observe than the holes in the old, dingy wall paper of the Burgdorf castle. In such cases he is reported even

to have put words into the mouths of his pupils and had them repeat them after him. This, of course, was a sheer reversal of his own theory. The use of words without adequate comprehension of their meaning was exactly what Pestalozzi wished by object teaching to avoid. Unfortunately this was the feature of his work that was too often copied by those who were mere imitators without real understanding. This degenerate phase of Pestalozzianism flourished in England.

Its Value to the Teacher. — A minor value of the objective method is that it encourages oral teaching. This has a tendency to liberate the teacher from the textbook, to which the average American teacher was, and still is, a slave. Oral teaching called for the development of a technique of such teaching; thus Pestalozzi contributed indirectly to the growth of scientific pedagogical methods.

But the real reason for objective teaching lies deeper than this, and grows out of the fact that seeing, hearing, and handling furnish the raw materials out of which thoughts are made. Stated in psychological terms: perceptual experience is prerequisite to imagination and conception. It is of no use to ask a child born and reared on the prairies, and who never has seen anything but a little country town, to imagine what Broadway looks like. He cannot do it; he has no mind-stuff out of which to build his mental picture. And it would be equally impossible for an East Side street urchin to imagine a wheat harvest in the Red

River Valley. If one were to try teaching the prairie boy how Broadway looks one would have to show him things. Pictures of New York City would help, especially moving pictures. A visit to Grand Forks or Fargo would help, because there he would see things a little like Broadway. A visit to Minneapolis would be better, because there he would see sights more nearly like New York. But really to understand he would have actually to visit Broadway itself. If the teacher has him merely read printed words in a book, words in a book are all he will get. He may memorize the words and recite them glibly, but he will learn nothing.

The student may bring this necessity for perceptual experience home to himself by the following experiments: Let him (1) study a typewritten copy of the Ford Manual from which the pictures have been omitted, then (2) study the printed manual, (3) spend time enough in a garage to see a Ford car thoroughly overhauled. Again: just before the public performance of some dramatic or operatic entertainment let the student (1) read or listen to a description of it. Then, if practicable, (2) let a class meeting or general assembly be devoted to the rendition of parts of it by amateurs, with connective descriptions; (3) visit the performance itself. A few such experiments will convince the student how little one gets from mere words without having had ear and eye experience with the thing itself.

Sometimes one may have seen, heard, or handled things enough like the things he is trying to imagine to help considerably. As Angell says in his "Psychology," one would build the mental image of a five-legged dog out of the imagery of four-legged dogs that he had seen. To show how this applies to teaching: There was once a farmer boy, whose father had raised a patch of sugar cane of the kind that sorghum is made from. The boy helped harvest the cane, rode on the loads to the cane mill, saw the stalks ground, smelled the juice as it ran down a trough into the pans, watched the man stir and skim and run it from pan to pan as it was being cooked, saw it drawn off and put into barrels, climbed on the piles of canes, saw the stack of mashed pulp, sauntered around among the rows of kegs and barrels filled with the finished product, ate the new-made sorghum till his stomach revolted against more, and washed his sticky fingers in the creek near by. A few days later that same boy's geography lesson at school happened to be about sugar making in Louisiana. He utilized his experiences at the sorghum mill as imagery out of which to build mental pictures of the southern sugar industry. They were doubtless inadequate, but they were vastly better than none, for without the sorghum mill experience he would have been utterly helpless."

Now when one reflects how much school education consists in trying to teach children about things they have never seen nor heard nor felt one begins to realize

how futile much of it is. Children learn words; they are confused by what they do not understand; they form the habit of juggling phrases; and their minds become spoiled. This is one reason why many people seldom look at books again after they have finished school.

Pestalozzi's idea was that it is the teacher's business to furnish perceptual experiences for the child. Whatever the teacher is trying to teach the child about she must make it "look-at-able," or better, "get-at-able." If she is teaching dry measure, have the pint, quart, peck, and bushel measures right there, have something to measure, and let the children measure it. If she is teaching grain dockage, take the children to the elevator, show them the "kicker" and dockage scales, and let them actually see the process. If they are studying "The Village Blacksmith" have them visit the local blacksmith shop. If the things she is teaching about cannot be brought into the schoolhouse or visited — and most of them cannot — then let the teacher instead assemble pictures, and any conceivable illustrative material she can. The moving picture machine should for this reason be freely used in all schools. Where objective or graphic illustration is impossible and verbal description must be depended upon, then every effort must be made to choose words with which the child has already associated rich, concrete, objective experiences. There is no one thing that the elementary teacher can do that will go

farther toward vitalizing her daily instruction than to put in practice Pestalozzi's principle of object teaching.

In later chapters we shall trace the immense influence that Pestalozzian object teaching has had upon American practice, and point out further applications that can profitably be made of it; for however great Pestalozzi's influence may have been it ought to increase as time goes on.

The Analytical Method. — Pestalozzi's analytical method may be passed by with a word because it was not a contribution. He taught that the constituent parts into which things can be analyzed were to be taught to children first; then put them together later. This was like the method of teaching reading then prevalent: begin by learning the letters, later put them into short syllables; then combine syllables into words, and finally assemble words into sentences. We now know this to be psychologically unsound, for the reason that the child's mind naturally grasps such wholes, or units, as it can use, and then analyzes them later as occasion arises. Thus it is easier to learn the word "dog" than to learn the letter "d," because the child has use for the word, but not for the letter. Later, when it begins to dawn upon him that words are made up of letters, he can be interested in learning the letters. Pestalozzi's analytical method was therefore a reversal of nature; and it has since been a gain to abandon it. What he should have taught, and what he perhaps had vaguely in mind, is that children

should learn thoroughly the simple things with which they naturally begin before trying to go on to more complicated matters. It should be added that this unfortunate phase of Pestalozzianism had considerable popularity in both England and America, so much so that it actually became for a time a retarding influence.

Pestalozzi's Influence. — At the beginning of the nineteenth century Prussia already had a well-organized system of public education. (See Chap. III, p. 61.) During the Napoleonic wars that state was at one time completely crushed. Then it was that Fichte, one of the great philosophers of the period, urged the further extension of education as a means of restoring the national life. He had met Pestalozzi in Zurich, and become an advocate of Pestalozzianism, especially of the idea that education can be made a means of uplifting a people. It was partly due to Fichte's influence that the seventeen students were sent up to Yverdon. The Prussian minister of education, himself a disciple of Pestalozzi, sent them with this commission (p. 69):

"What I want you to do is to warm yourselves at the sacred fire which burns in the heart of this man so full of strength and love, whose work has remained so far below what he originally desired, below the essential idea of his life, of which the method is only a feeble product. . . . You will have reached perfection when you have clearly seen that education is an art and the most sublime and most holy art of all, and in what connection it is with the great art of the education of nations."

This was in 1808. Upon their return they were placed in positions of influence and official leadership, with the result that in a few years the Pestalozzian methods were engrafted upon Prussia's excellent school organization. Object teaching has ever since characterized the German method. The result was known as the Prussian-Pestalozzian system. This occurred before the death of Pestalozzi; and it was chiefly from Prussia that Pestalozzianism was later introduced into the United States. The Pestalozzian influence in America has been very considerable but it will be most conveniently discussed in the chapters on the periods when it occurred (see pp. 125, 166, 266).

One of the outstanding characteristics of Pestalozzi's personality was his almost religious consecration to the cause of human welfare. While he manifested this trait more conspicuously and with more self-sacrifice than most great educators, nevertheless, it is a trait that they all reveal almost equally with the great heroes of the church. It is a quality without which no educator can become really great. Teaching is no trade for the self-seeker.

CHAPTER V

HERBART AND FROEBEL

HERBART and Froebel were both products of the period under discussion in the last chapter. While their life and work, especially those of Froebel, extended somewhat beyond 1835, the close of the Nationalization Period in America, their influence in America did not begin till after the Civil War. There is some uncertainty, therefore, as to the logical place to insert their story; but the student will probably most readily locate their dates if they are placed between Pestalozzi and the New England Common School Revival, since chronologically that is where their lives, if not their American influence, belong.

Herbart's Biography. — Herbart was the older of these two educational theorists. He died in 1841 at the age of sixty-five. For almost forty years he had been a university professor of pedagogy and philosophy, first at Göttingen, later at Königsberg, and finally at Göttingen again. His life was accordingly almost entirely free from the disappointments, struggles, and poverty with which Pestalozzi was so constantly harassed. Herbart was born into the professional class; his parents and grandparents were among the

intellectuals of the time. Herbart himself was educated at the University of Jena, where, as an undergraduate, he distinguished himself by the brilliancy of his philosophical writings. He was also profoundly influenced by the thought life of the age. His education had put him in possession of the best intellectual contribution of the ancient Greeks and, what is more important, gave him an intimate touch with the brilliant work of the great thinkers and writers mentioned in the last chapter. These influences furnished the background for his life work; they made him a philosopher. Before completing his university career, however, he spent three



JOHANN FRIEDRICH HERBART

years in Switzerland as private tutor to the three sons of the Governor of Interlaken. Here he made a very careful and discerning study of his three pupils, of their differences of age and personality, and of the subject matter and methods by which they could properly be taught. Five of the bimonthly written reports that his employer required of him are still ex-

tant, and show the beginnings of his later work. It was during his stay in Switzerland that he visited Pestalozzi at Burgdorf and became very greatly interested in his fundamental principles. He also wrote and spoke on the Pestalozzian methods.

As a university professor he established the first pedagogical seminary and practice school in connection with a university, worked out a system of psychology as a basis for his pedagogy — he was the father of modern educational psychology — and evolved a complete theory of education. His most important work, in which his matured pedagogical theories are set forth, was the "Outlines of Educational Doctrine," published in 1835. Since it was Herbart's pedagogical theories that most influenced American education later it will be necessary to outline them briefly.

The Aim of Education. — The democratic aspirations of the Napoleonic era — Germany was fighting French autocracy then! — and the insight of Pestalozzi, Fichte, and many others that education was to be the means of popular uplift, furnished the logical starting point for Herbart's thought. Moral character, he said, is the aim of education. Moral character includes virtue, intelligent insight, self-control. Impart these to the rising generation of any nation and the hopes of the men of that aspiring age would be realized.

Developing character in young persons is largely a matter of building up certain approved interests

within them. The differences between a pirate and a priest is in their interests. That character consists in interests is especially obvious when the word character is taken in the broad sense of qualification to take part efficiently in civilized life. Education then, as Herbart saw it, is a matter of building up in young persons an interest in the interests of civilized society.

But how can those interests be acquired? Children are interested in childish things. Civilization is made up of adult interests. But those adult interests of civilized life must be acquired by children while they are still immature. Otherwise they come to maturity unprepared, and that, if general, would break civilization down. To impart mature interest to immature children is the paradox demanded of the school. How to do it is the perennial problem of teaching. This was the problem that Herbart attacked. He must have seen that the traditional curriculum, the memoriter methods, and the harsh discipline so common then were not accomplishing it. The diet served pupils was not being digested and assimilated; it was only making them victims of intellectual and moral malnutrition. Herbart accordingly found himself confronting the problems: (1) What shall be taught? and (2) How shall it be taught so as to make sure that it will take effect? What mental diet shall be offered, and how shall it be served up so that it will be digested and assimilated, and actually nourish and eventually mature the sort of moral character required by society?

Subject Matter. — Herbart's answer to the first question was: History and literature. He advocated developing the child's interest in many things; but his emphasis upon history and literature was most important, both logically and historically. His reasons for this choice of subject matter are expressed in

the following quotation from Herbart's "Science of Education":

"Give to children an interesting story, rich in incidents, relationships, characters, strictly in accordance with the psychological truth, and not beyond the feelings and ideas of children; make no effort to depict the worst or the best, only let a faint, half-unconscious moral tact secure that the



THE ENVIRONMENT OF THE GREAT REFORMERS

interest of the action tends away from the bad towards the good, the just, the right; then you will see how the child's attention is fixed upon it, how it seeks to discover the truth and thinks over all sides of the matter, how the many-sided material calls forth a many-sided judgment, how the charm of change ends in preference for the best, so that the boy, who perhaps feels himself a step or two higher in moral judgment than the hero or the author, will cling to his view with inner approbation, and so guard himself from a coarseness he already feels beneath him."

In short he thought moral ideals and sentiments would be absorbed from these subjects. It may be added in passing that he meant history to include not merely national but general history, and he was particularly partial to the literature of the Greeks. This idea of Herbart's has completely revolutionized the teaching of history and literature in our own elementary schools since 1890; but that will be told later (cf. pp. 263 ff.).

The "how" of instruction was in Herbart's thought a much more complicated problem, and his answer divides itself into two parts: (1) how to arrange the subject matter so it will interest the child, and (2) how to conduct the recitation.

Arrangement of the Curriculum. — To answer the first he worked out quite an elaborate theory. Although Darwin had not yet published his "Origin of Species" the scholars of that day were already beginning to be interested in the theory of evolution. Herbart presented the related theory that each individual in his own personal growth climbs up the same ladder that the race as a whole has climbed in the course of its evolution. For example, there once was a time when men were tree dwellers; and there is a time in nearly every boy's life, at, say, about eight or ten years of age, when he seems to have a passion for climbing trees. According to Herbart's theory the boy at this stage of his development is recapitulating the tree-dwelling stage of the race; and likewise all the child's instinctive interests, at various stages of his develop-

ment "recapitulate" some corresponding stage of the race's development. This is known as the "*culture epochs theory*." Enough illustrations can be selected to make this theory appear plausible, but the exceptions are too numerous to permit its being taken very seriously.¹ Certainly it is easier to understand the moment one gives up trying to believe it. Nevertheless, there is a vein of truth in it, and Herbart relied upon it as a guide for arranging the subject matter of the curriculum. History was to be made the core of the curriculum; for history "recapitulates" the life of the race. Literature was to be studied in connection with the history of the period it described. The other subjects were likewise to be "*correlated*" around this history-literature core. The geography of places referred to was to be studied as a part of the history or literature lesson itself. Opportunities were to be found or made for "correlating" arithmetic, hygiene, or what not, in the same way.

What Herbart's theory was may perhaps best be understood by his disciples' attempt to work it out in concrete detail. The following table² of topics for the eight years of the elementary school was planned a generation later by Ziller of Leipzig.

School Year

- 1st Grimm's Fairy Tales
- 2d Robinson Crusoe

¹ See Thomas, "Source Book of Social Origins," p. 26.

² Parker's "History of Modern Elementary Education," p. 408.

SACRED HISTORY		GERMAN HISTORY	
3d	Patriarchs and Moses	Legends of Thuringia	
4th	Judges and Kings	Nibelungen tales	
5th	Life of Christ	Charlemagne, etc.	
6th		Middle Ages	
7th	Apostle Paul	Reformation	
8th	Luther. Catechism	Frederick the Great	
		Napoleonic Wars, etc.	

It is a little difficult to see how the items in Ziller's table correspond to eight separate and distinct stages in the child's development. Nevertheless around this core Rein of Jena "correlated" all the subject matter of the elementary curriculum, working it out in sufficient detail to fill a large book.

But Herbart was attempting to solve the problem of how to insure children's interest in the curriculum subjects. The culture epochs theory seemed to offer a simple solution to that very difficult problem. According to that theory children have the same natural interests at any given stage of their growth that the race had at the corresponding stage of its evolution. Therefore, at the tree-dwelling stage the child can easily be interested in anything the tree dwellers themselves were interested in. Accordingly, at each stage of the child's development give him the history, literature, and other culture material of the race at the corresponding stage; and his interest will be assured. That is what the Ziller table pretended to do.

It will be a mistake for the student to discard the cul-

ture epochs theory as altogether false. There is a core of truth in it. In general, children are indeed interested in the childhood interests of the race; there is a sense in which pre-adolescent boys are young Indians; the mature achievements of civilization require some maturity of mind and experience to be appreciated. But, like the earth's crust, not all the geologic layers can be found in any one place. Not much practical use can be made of the theory in curriculum building; and the attempt has now been largely abandoned.

The Recitation. — Let us return now to the second phase of Herbart's problem of method, namely, how to conduct the recitation so as to make sure of interesting the children. Herbart objected to the sort of instruction in which children are given isolated facts. He explained that there are naturally four steps in the process by which subject matter is properly presented to children. These he called (1) clearness, (2) association, (3) system, and (4) method. By the first he meant the explanation of the details of the subject; by the second, comparison of part with part by conversation; by the third, selecting the leading thoughts; and by the fourth, use of the new knowledge in independent thinking. Herbart suggested these steps to be followed in the elaboration of new subject matter, with the idea that it might sometimes require weeks or months to complete the process. But his followers worked the method of procedure out as a lesson plan

to be followed through and completed in each and every recitation. They subdivided one of the steps, however, making five in all as follows: preparation, presentation, comparison, generalization, and application. These are the famous five formal steps of the Herbartians, which have had an immense popularity in America. We shall return to them later.

Apperception. — Underlying all these methods for interesting the children there was in Herbart's thought an important psychological doctrine, namely the doctrine of apperception. This means that we naturally take an interest in things that we already know something about. In other words, the new material a teacher gives the child must be related in some vital way to what he is already interested in or else he cannot take interest in it. For this reason a speaker would handle the same subject very differently before a group of farmers, a meeting of college professors, or a class of school children. Their experiences, *i.e.* their "apperceptive bases," are all different; and a speech that would be easily "apperceived" by one group might not be "apperceived" by another at all. Apperception is the mental act of interpreting new material in the light of past experiences. There is no other way to interpret new material. If the pupil does not apperceive he does not learn. But if he can connect the lesson material with what he is already interested in he may become interested in the lesson,

understand it, and readily "learn" it. Herbart's theories as to how subject matter should be organized in the course of study and how it should be presented in the recitation were an attempt to solve the problem of apperception, and so assure the pupils' interest. His contribution was more in the presentation than in the solution of the problem; psychologists and educators have been working on its solution ever since.

Herbart's Influence. — Although Herbart's work was nearly all done before 1835 his influence upon American education did not begin till half a century later. But then it was immense. At the proper place (Chap. X) that influence will be discussed.

Froebel's Early Life. — The details of Froebel's biography are extremely interesting, and the circumstances of his early life had some influence in determining his theories and their promulgation after his death. He was born at the village of Oberweisbach in the Thuringian Forest in 1782. His mother died in his infancy. His father, who was a busy pastor, neglected him; and his stepmother mistreated him. Part of his childhood was spent in the home of a maternal uncle. At fifteen he was apprenticed to a forester. His communion with nature during this period of solitary rambles in the forest stimulated the mysticism which characterized much of his mature thinking. Later he attended the university at Jena which was at that time the intellectual center of Europe. The

evolutionary theory was beginning to influence science and Jena felt the impulse of this new movement. Fichte and Schelling, too, were filling the place with discussions of their idealistic philosophy, and in the near-by city of Weimar lived the great leaders of the new romanticism in literature. It is possible that Froebel may have come under the personal influence of Goethe and Schiller, and that this experience enabled him, as one writer expresses it, to "participate in the dominant thought life of the age." And there has scarcely ever been a time and a place where a greater thought life centered.



FRIEDRICH W. A. FROEBEL

However, his university career ended in disgrace — he lay more than two months in jail for a debt of less than ten dollars. The next four years he spent at various sorts of work, none of which satisfied him. In 1805 he began the study of architecture at Frankfurt. Here he met Grüner, director of a Pestalozzian model school. Through this man Froebel found himself, and realized that his life work was to be that of an educator. He himself said: "From the first I

found something I had always longed for, but always missed ; as if my life had at last discovered its native element. I felt as happy as a fish in water." Froebel spent two years in Grüner's school, after which he became private tutor to three boys. He secured the consent of these boys' parents to take them to Yverdon, where he taught them under the guidance of Pestalozzi. This was a fruitful period in Froebel's development.

We find Froebel again at the age of nearly thirty at the universities, this time at Göttingen and Berlin. Thence he enlisted in the Prussian army, and went through the campaign of 1813 against the Napoleonic aggressions. But even as a soldier his mind was on his teaching. His military experience showed him the value of discipline and united action — a lesson that we Americans have just relearned — and no doubt helped him to counteract the Rousselian fallacy of education in isolation. During his career as a soldier he met Heinrich Langethal and Wilhelm Mittendorf, theological students ten years younger than he, who became his life-long friends, disciples, and assistants.

Froebel's First Educational Venture. — In 1816 Froebel returned to Keilhau to take charge of the education of his five nephews. Here he founded his "Universal German Institute of Education." He was joined in this enterprise by Langethal, Mittendorf, and Barop. These young men all married and formed an

educational colony. Froebel's wife was a brilliant idealist and romanticist, Henriette Wilhelmine Klepper (*née* Hoffmeister), the daughter of a Prussian Councillor of War. She exerted a large influence over his early career. Here these young enthusiasts put into practice the fundamental principles of Froebel's theory. Here in 1826 he published his "Education of Man," which contains his educational philosophy. The following is a part of inspector Zeh's official report on the institution :

"I found here a closely united family of some sixty members, held together in mutual confidence, and every member seeking the good of the whole. That this union must have the most salutary influence on instruction and training and on the pupils themselves, is self-evident. No slumbering power remains unawakened; each finds the stimulus it needs in so large a family. The aim of the institution is by no means knowledge and science merely, but free self-active development of the mind from within."

Froebel continued at Keilhau for fourteen years, after which he undertook several educational ventures in Switzerland, one of which was at Burgdorf, but none of which was successful.

The Blankenburg Kindergarten. — In 1837 he returned to Blankenburg, near Keilhau, where he opened his first real Kindergarten. In connection with this institution (and later at Leibenstein) he conducted a training class for young women teachers. His wife died in 1839. In 1849 he married Luise Levin, his

favorite kindergartner. She had through a secret devotion to Froebel taken domestic service in Keilhau in order to be near him, and, although uneducated and nearly forty, she completed the kindergarten training. After Froebel's death she was influential in perpetuating and spreading his doctrines, as we shall see. It was



THE ORIGINAL KINDERGARTEN
HOUSE AT BLANKENBURG

during this period of his life that Baroness von Bülow became a disciple of Froebel. She was an intelligent, versatile woman. After his death she lectured and established kindergartens in France, Belgium, Holland, England, and Italy.

Disappointment and Death.

—Froebel devoted the last twelve years of his life chiefly to his kindergarten. He

trained many teachers; and kindergartens were established in many places throughout Germany. But his life ended in tragedy. A great democratic upheaval swept over Europe in 1848; but it was presently put down by the concerted efforts of the Hohenzollerns, the Hapsburgs, and the Romanoffs. Then followed a period of repression under the leadership of Bismarck and Metternich. All forms of democratic aspirations were ruthlessly suppressed. Froebel's name furnished a pretext for confusing his

work with the socialistic writings of his nephew Karl, his kindergartens were suppressed by edict of the Prussian government on the absurd charge of being atheistic. Bismarck had just come into power and was beginning that policy of repression by which the foundations of later Hohenzollern autocracy were laid. Froebel died broken-hearted within a year.



THE ORIGINAL KINDERGARTEN CIRCLE AT BLANKENBURG

The Kindergarten. — During the course of his life Froebel engaged in numerous educational ventures, the most famous, if not the most significant, of which was his Kindergarten, established at Blankenburg. This was a school for children between the ages of three and seven. The exercises consisted mostly of play especially organized to suit the needs of young children as they were conceived by Froebel. The object, as Froebel expresses it, was “to give the children employment in agreement with their whole nature, to

strengthen their bodies, to exercise their senses, to engage their awakening mind, and through their senses to bring them acquaintance with nature and their fellow creatures; it is especially to guide aright the heart and the affections, and to lead them to the original ground of all life, to unity with themselves." The original kindergarten exercises differ considerably from those one sees in a modern kindergarten. The activities, consisting almost entirely of play, were of three types: (1) "play songs" for mother and child; (2) six "gifts," consisting of ball, cube, and other geometrical forms; and (3) "occupations," or activities involving the use of the "gifts." This program was very much influenced by Froebel's strange mystical philosophy. He seems seriously to have believed that nature in some mysterious way symbolizes and teaches spiritual and moral lessons. Children are influenced by occult analogies, he believed. The ball, the cube, and the circle are symbols of spiritual and social perfection. It was for this reason that he used them in his kindergarten plays.

"I am convinced that the exalted and often ecstatic delight of children in their simple movement-plays is by no means to be explained through the exertion of mere physical force — mere bodily activity. The true source of their joy is the dim premonition which stirs their sensitive hearts that in their play there is hidden a deep significance; that it is, in fact, the husk within which is concealed the kernel of a living spiritual truth."

Belief in these symbolisms has been largely dropped since Froebel's time, and the resulting activities have been modified to meet the instinctive needs of childhood.

Froebel's Pedagogical Principles. — Although best known as the founder of the kindergarten, Froebel's chief contribution to education was in the pedagogical principles upon which the kindergarten was based. In his earlier teaching experience and educational experiments he had sought to apply these same principles in secondary and elementary education. He meant them to be so applied, and they have been so applied in recent years in America. They are set forth in his book, "The Education of Man."

Mysticism. — Froebel was a mystical religious philosopher. His philosophy resulted from his temperament, his early training, and his association with the idealistic philosophy that centered at Jena. This religious philosophy of his is summarized in the following quotation :

"In all things there lives and reigns an eternal law. This law has been and is enounced with equal clearness and distinctness in nature (the external), in the spirit (the internal), and in life, which unites the two. This all-controlling law is necessarily based on an all-pervading, energetic, living, self-conscious, and hence eternal Unity. This Unity is God. All things have come from the Divine Unity, from God, and have their origin in the Divine Unity, in God alone. All things live and have their being in and through the Divine Unity, in and through God. The divine effluence that lives in each thing is the essence of each thing."

It is customary to assert that Froebel's doctrine of unity was vaguely conceived and had no such bearing on his pedagogical theories as he imagined it had. No doubt this is partly true; and yet modern education would be greatly enriched if all teachers entertained the religious reverence expressed in the following:

"The purpose of education is to raise man into free, conscious obedience to the divine principle that lives in him, and to a free representation of this principle in his life. It should lead man to see that this principle also constitutes the essence of nature and is permanently manifested in nature. It should demonstrate that the same law rules both nature and man, and that man and nature proceed from God and are conditioned by him. It should lead and guide him to clearness concerning himself, to peace with nature, and to unity with God. The inner essence of things is recognized by the innermost spirit of man through outer manifestations, and all education, all instruction and training, start from the outer manifestations of man and things, and, proceeding from the outer, act upon the inner, and form its judgments concerning the inner."

The great educators of all time have been inspired by religious conceptions of the dignity of man and the function of education. It is doubtful if an effective craft spirit, or an educational system adequate to the needs of a great civilization, can be built on any other basis.

Froebel's two great pedagogical principles are (1) self-activity and (2) social participation.

Self-activity. — Self-activity is sometimes referred to under different names, as: self expression, motor

expression, or free development. It means furnishing children opportunity to do the things that their inner nature prompts them to do. It will be recognized as closely akin, therefore, to Rousseau's naturalism. It differed from Pestalozzi's observational method in that the latter was passive, while motor expression is active. In accordance with this principle Froebel conducted much of his teaching through play. The children were much in the open air and in the gardens around the school. He let them roam in the woods, hunting flowers, insects, birds, and small animals. He taught them all sorts of stories and songs. Thus he sought to unfold the powers latent within the child.

"Man is developed and cultured toward the fulfillment of his destiny and mission, and is to be valued, even in boyhood, not only by what he receives and absorbs from without, but much more by what he puts out and unfolds from himself. Plastic material representation in life and through doing, united with thought and speech, is by far more developing and cultivating than the merely verbal representation of ideas."

"The starting point of all that appears, of all that exists, and therefore of all intellectual conception, is act, action. From the act, from action, must therefore start true human education, the developing education of the man; in action, in acting, it must be rooted and must spring up. Living, acting, conceiving, — these must form a triple chord within every child of man, though the sound now of this string, now of that, may preponderate, and then again of two together."

There is no more important principle in pedagogy than this, as we are coming to realize more clearly every day. If some one objects that children like to do destructive things, the answer is that there are plenty of constructive things for them to do that express their instinctive tendencies just as really as do the destructive. A boy is naturally just as much interested in making something with tools as he is in throwing paper wads. It is the business of the teacher to find and furnish constructive activities that furnish real self-expression. That will prevent all sorts of trouble. It is the normal, rational way to conduct not only school but society as well. People need complete self-expression, not only in industry, but in the varied interests of a well-rounded life, if vice, crime, social unrest, and personal despair are to be prevented.

Moreover, it is by self-activity that one learns most effectively. Education is a process of growth, and growth results from doing the things that one's interests prompt him to do. Mental activity is far more alert and successful when the learner's own purposes are being realized and he is finding satisfaction in the results than when his activity is forced. This principle of course condemns much of the old gradgrind methods of teaching, and demands the complete reorganization of school activities.

Social¹ Participation. — Social participation means taking part with associates in joint enterprises, such as playing games together, working together on team

enterprises, or discussing a subject of mutual interest in a group. The following quotations illustrate Froebel's views on this subject :

"The purpose of the Union is to accustom men to co-operate with each other in a conscious and mutually profitable manner. Such a custom is best started in infancy, of course, but, if neglected at the proper time, it may still be produced at any subsequent time. Man should develop in harmony, peace, and joy within himself and with those around him, in accordance with human nature and destiny ; and this should continue through all stages of development, and in all the various circumstances of life, in the family and school, in domestic and public life."

"It is by no means only the physical power that is fed and strengthened in these games ; intellectual and moral power, too, is definitely and steadily gained and brought under control. Justice, moderation, self-control, truthfulness, loyalty, brotherly love, and again, strict impartiality — who, when he approaches a group of boys engaged in such games, could fail to catch the fragrance of these delicious blossomings of the heart and mind, and of a firm will? Thus, the games directly influence and educate the boy for life, awaken and cultivate many civil and moral virtues."

Froebel's doctrine of social-participation completely reversed Rousseau's theory which discouraged the social grouping of children ; but it was after all in harmony with his fundamental principle of naturalism. There are two profound reasons for social participation. One is that education is a training for social life, and the only way to prepare for social relations is to practice

in social relations. The best way to learn fair play is to learn to play fair. For this reason social participation is receiving a great deal of emphasis in present-day pedagogical theory, the reason for this arising from the fact that modern society is becoming so complex and coöperative. Its success depends, therefore, upon social habits and ideals being developed in the rising generation. The other reason for social participation is that it actually stimulates learning. In groups, what one does not think of another may, and each gets the benefit of the suggestions of all. Discussion is an example that will appeal to mature students. Moreover, the competition and rivalries of group activity, while they stimulate the individual, also furnish motives for effort which are more than merely individualistic. Deeper than all that lies the simple fact that most of our purposes require a group to operate in. Let the reader make a list of the things he likes to do, and then cross out the ones that hermit life would take the joy out of. He will be surprised at the number; which means that we are social beings, and that the learning process is a social process. Isolation takes the purpose and motive out of learning, and so stifles it. Teamwork and group activities, therefore, are favorable conditions of learning. This also condemns the old school methods where each pupil worked for the most part with and for himself, and mutual help was a school offense. It, too, demands a reorganized school.

Froebel's Influence. — Within a generation after Froebel's death the kindergarten became a familiar institution in most European countries (except Germany!) and also in the United States. Its spread in Europe was largely due, as we have seen, to the work of the Countess von Bülow. Most European kindergartens were established on a private basis. Their introduction into the United States and their incorporation within the public school system will be described in a later chapter. (See pages 267 to 275.)

So will the influence of his two pedagogical principles, self-activity and social participation. Suffice to say here that the dominant educational theory of the day, that of John Dewey and his followers, is strictly Froebelian in the aims and methods it advocates, although it has been urged that his principles were not derived from Froebel. Changes are rapidly occurring in American school practice which may at least be explained and justified by the Froebelian philosophy, though it is debatable whether Froebel's influence is directly responsible for bringing them to pass. Among such innovations may be mentioned supervised playground activities, games as schoolroom devices, dramatization, "busy work," clay modeling, drawing, folk dancing, singing, motivation, project teaching, group projects, student activities in high school, laboratory methods, domestic science, manual training, agriculture, and vocational training, besides all such experiments as those described in Dewey's "Schools of

To-morrow." If the elementary teacher will consider each of these carefully he will discover self-activity, or social participation, or both, in each and every one of them. He will be convinced that the spirit of Froebel is still alive and rapidly transforming our education. There can be no more vital question for the teacher to ask himself every day as he plans his work than this: How can I make further application of the principles of Froebel?

It may be added in conclusion that there is a close kinship between the pedagogical theories of Froebel (as well as those of Rousseau) and the ideals and aims of democracy. In an autocratic or caste-ridden society education always imposes some artificial and unnatural restraints and requirements upon its pupils. In this way it forms habits of thought and action that tend to make the pupil submissive. But democracy aims to make individuals free. Therefore its education must bring out the selfhood of each citizen. Moreover, democracy is a great voluntary coöperative enterprise. Therefore education must give children practice in coöperation. Perhaps von Raumer, the autocratic bigot, was shrewder than he is given credit for being in his suppression of Froebel's kindergarten. Certainly those who best understand the needs of democracy are to-day advocating an education based on self-activity and social participation.

CHAPTER VI

THE GREAT EDUCATIONAL AWAKENING, 1835-1861

Territorial Expansion. — The period in American history between 1835 and 1861 is marked off from the periods before and after by characteristics quite peculiar to itself. In the first place it was an era of vast territorial accessions. Texas was annexed in 1845, the Oregon territory was acquired in 1846, Mexico ceded California and the southwestern area in 1848, and the Gadsden purchase occurred in 1853. These additions expanded the United States to its present continental area.

Far more important than mere territorial expansion, however, was the influence of the westward movement of the population. Throughout this period the "frontier" was constantly changing, and the conditions of frontier life which had already meant so much for the development of democracy were continued for another generation. At its beginning mere settlement had, it is true, pressed westward to the Mississippi River, and somewhat beyond; but frontier conditions prevailed throughout the whole country west of the Appalachians. At the close of the period that area had become a region of developed farms and growing cities, while the frontier had been pushed

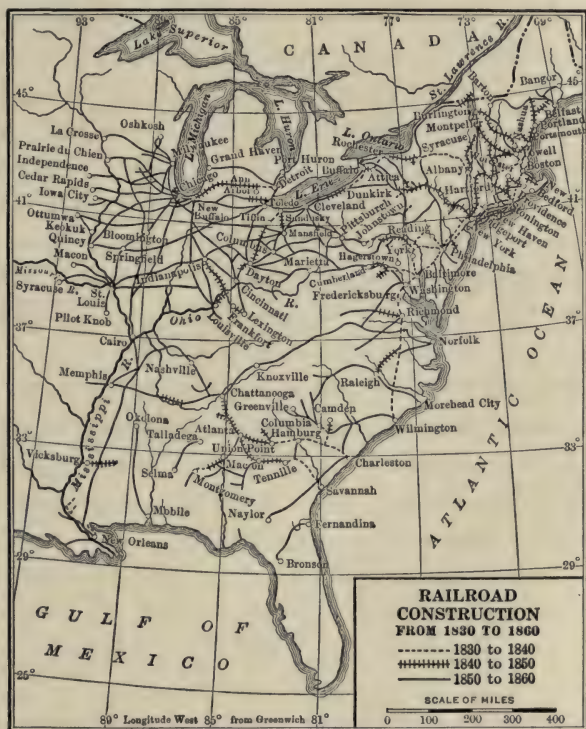


DISTRIBUTION OF POPULATION, 1830



DISTRIBUTION OF POPULATION, 1860

to the dry belt. The conditions of life and the standards of living in this semi-pioneer region are described in the fiction of Edward Eggleston, Mark Twain, Bret Harte, and Harriet Beecher Stowe.



Industrial Development.—It was also a period of unprecedented industrial development. This is shown by the growth of the cities. In 1840 there were forty-four towns of over 8000 population, in 1860 there were 141. New York City was approaching

the million mark. Railroad building progressed rapidly. The first successful experiments with steam locomotives were made in 1831. The Baltimore and Ohio was completed to the Cumberland River in 1835. By 1860, 30,000 miles had been built; several trunk lines connected Chicago with the Atlantic seaboard, and one connected Chicago and the Gulf of Mexico. The country east of the Mississippi River was pretty well netted, especially north of the Ohio. (See map.) There was a similar growth in commerce and manufactures, following the panic of 1837. The iron industry flourished. The output of coal trebled between 1840 and 1860. The invention of the sewing machine, and its application to the manufacture of ready-made clothing and shoes, revolutionized both of these important industries, changing them from the domestic to the factory basis, and very greatly increasing their output. The growth of cotton manufacturing is indicated by the accompanying table.¹

YEAR	NO. SPINDLES	BALES CONSUMED	EMPLOYEES	EXPORTS
1840	2,284,631	295,000	72,119	\$ 3,000,000
1860	5,235,727	978,000	122,028	11,000,000

The protective tariff was greatly reduced, and on some articles practically abolished; our infant industries had come of age. Inventions, such as the McCormick reaper, were revolutionizing farming. The telegraph

¹ From Coman's "Industrial History of the United States," p. 259.

had come into general use. Gold had been discovered in California. The wealth of the country was quadrupled, and the per capita wealth more than doubled between 1835 and 1861.

Humanitarian Movements. — Territorial expansion and industrial development worked mighty changes in the life of the people. New and difficult social problems came with the growth of the cities and the rapid change from domestic to factory production. Easy means of transportation made it possible for men to move quickly from place to place as the demand for labor fluctuated, and the stabilizing influences of a relatively permanent home were greatly reduced. Some men were richer than men had ever been in the past, but by contrast poverty and hardship became more clearly defined. All this fired the imagination. The material means of human welfare were at hand as never before in the world's history; and the resources for further development seemed limitless. Furthermore, the American experiment in democracy was succeeding, and succeeding on a vastly larger scale than had ever been anticipated. Accordingly men were dreaming dreams and seeing visions of what American democracy might be expected to bring forth in the way of human happiness and welfare. Nothing seemed impossible. Hence it was a period of idealism, which expressed itself in many ways.

A great wave of temperance reform swept over the country. It produced the famous Washingtonian

Society, an organization of reformed drunkards; it put prohibition laws on the statute books of most of the northern states, and set up total abstinence, instead of mere moderation, as the American temperance ideal. The magnitude and importance of this reform is hardly appreciated now, because it has nearly all had to be done over again during the past forty years; nevertheless without that earlier reform as a foundation we should hardly have achieved the recent prohibition amendment. The needs of the afflicted were more clearly recognized, and steps were taken to make less bitter the lot of the blind and the deaf. The first school for the deaf was opened in 1871; the first institute for the blind in 1832. Very important humanitarian reforms were made, too, in prison management and the care of the mentally deranged. Almost unimaginable barbarities had formerly been practiced in the treatment of both prisoners and the insane. Howard, the Englishman, and Beccaria, the Italian, had advocated prison reform during the latter half of the eighteenth century, and many improvements were made in the conduct of prisons and insane asylums. These were phases of a great humanitarian movement which characterized the early nineteenth century, and which seems to have been a by-product of the rise of democracy, but it was doubtless influenced profoundly by the Industrial Revolution, the effects of which were felt in England and on the continent somewhat earlier than in America.

Another phase of the same movement was the agitation for the abolition of negro slavery. This agitation originated with the New England clergymen and intellectual leaders; it was at the focus of public discussion for a generation; the churches debated, and some of them split, over it; and the storm eventually broke in the Civil War.

Idealism. — An almost continuous revival of evangelical religion was in progress throughout the period, especially through the West and South. One feature of this was the great camp-meetings attended by tens of thousands. Methodist circuit riders and Baptist evangelists were the chief agents of this movement. Foreign missions became an important religious interest during this period. But perhaps the most significant spiritual development was the work of New England's great literary geniuses, — Bryant, Longfellow, Whittier, Lowell, and Emerson. Their messages were essentially humanitarian and idealistic.

The Educational Awakening. — These movements were all related; they were all manifestations of the same spirit. It was a period of aspiring faith in the possibilities of human betterment. It seemed as if a golden age were dawning, in which any reform whatever might hope to succeed. The Great Educational Awakening was only another phase of the same general tendency; the reform of education was but one of the reforms of the age. In particular the growth of democracy and the extension of the franchise

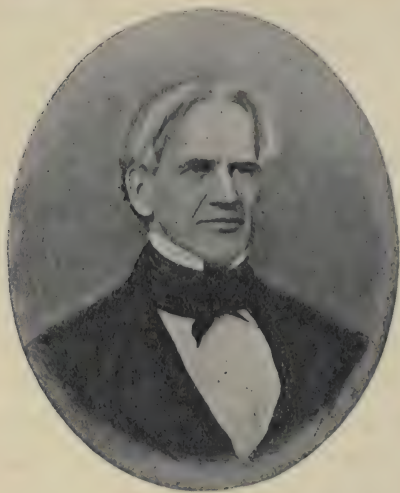
obviously called for an extension and improvement of education. The immediate aim was to create an educational system that would be good enough to supply the needs of the new democracy, and that would be consistent with its ideals. If all citizens were to vote, and so determine the destinies of the republic, obviously they must be qualified to vote intelligently. If the new democratic ideals demanded, and the new industrial prosperity rendered possible, a new social equality, then new opportunity for education must accompany the new estate of the masses. The laboring classes, especially in the cities, began to demand education as their right, and the new religion encouraged their aspirations. Philanthropists, convinced that education would lift the masses out of poverty and crime, had long been contributing to its extension (cf. pp. 44, 56). Thus economic, social, political, and philanthropic forces tended to accelerate the educational reform that had been gathering force for a generation.

The Forerunners. — Viewed from the perspective of the present the Great Educational Awakening looks like the lengthened shadow of a single personality, that of Horace Mann. And so it was to a very great degree. He was by all odds the dominating personality of the period, and was for nearly a century the most commanding figure in American educational history. But the movement had its beginnings before he appeared upon the scene, and Mann had his forerunners. Rev. Samuel R. Hall had conducted private

normal schools in New England for a quarter of a century and Rev. F. H. Gallaudet had urged normal training. Thus the way had been paved for state normal schools. James G. Carter deserves more credit than any one else for securing the passage of the bill that brought Mann into prominence. He also was influential in securing appropriations for the first state normal school; and even then the measure would not have been passed had not Edmund Dwight come forward with a gift of \$10,000 to the state for the purpose. These men prepared the way for Horace Mann, and secured his appointment to the secretaryship of the Massachusetts Board of Education in 1837. Moreover, these men were themselves in no small degree the products of the age in which they lived. Numerous agencies had been preaching educational reform for a generation. Statesmen of vision had set forth the new educational ideals of democracy (see p. 38 ff.); numerous societies had been organized to promote the cause of educational progress. The educational awakening grew out of the beginnings that had been made in the previous period; the line of demarcation is not definite; this period is merely characterized by a swifter rate of progress rather than by entirely novel departures.

Biographical Sketch of Horace Mann. — This great leader's youth was a typical case of an ambitious young American struggling up from poverty. His father died when he was thirteen, and his early life was full

of hardships and work too severe for him. He got but a few weeks' schooling each winter; but he read every book in the village library, and conceived an inordinate craving for knowledge. He entered Brown University at twenty years of age, and worked his way through by teaching during the winter months.



HORACE MANN

Afterward he took a law course, was admitted to the bar, and practiced law successfully till he was past forty. During this time he was several times elected to the state legislature, and was president of the senate at the time he turned to educational work.

It is an interesting bit of personal gossip to know that his wife, Mary Peabody Mann, was a sister of Elizabeth Palmer Peabody of kindergarten fame (see p. 171) and of Mrs. Nathaniel Hawthorne. She later wrote her husband's biography; and in 1891 their son, George C. Mann, published his father's reports and addresses in four volumes.

Secretary of the Board of Education. — During his legislative career Horace Mann was directly responsible

for the passage of four important reform measures, the fourth of which was the act creating a State Board of Education. The object of this law was to counteract the evil effects of the degenerate district system by creating some central agency of supervision, leadership, and control. As soon as the bill was passed Mann was persuaded by his friends, Governor Everett and Edmund Dwight, to give up his law practice and political prospects and accept the secretaryship. This office corresponded to what in many states is now called the state superintendency.

His decision — so momentous for American education — is to be explained by his own experiences, the idealism of the age, and the resultant philosophy of life that motivated him. The hard experiences of his youth made him crave a better opportunity for all children. He had a profound and sympathetic faith in the capacity of all human beings to become good, intelligent, and useful. He looked upon the public school as the most promising institution in democracy. He wrote a friend: "My law books are for sale. My office is to let. The bar is no longer my forum. I have abandoned jurisprudence, and betaken myself to the larger sphere of mind and morals." This was in 1837. Very few men at that date discerned as clearly as he the educational needs of democracy.

For twelve years he carried on his work of educational leadership with incomparable devotion and energy.

"He went from one end of the state to the other, into large towns and obscure villages, seeking to call together the people and waken in them an interest in their schools. He appealed to them with the power of his high-strained, impassioned eloquence. Sometimes, after sweeping a room and building a fire in severe winter weather, he could get but a handful of people to listen to him. . . . For years he had been suffering in health and threatened with consumption, yet fifteen hours a day was the usual measure of the secretary's work. But nothing daunted him. How he endured the labor nobody can tell. There seems to be the power of vitality in a lofty purpose."¹ His devotion is shown by the fact that at one time he even mortgaged his own property to help secure the establishment of normal schools.

He sought by all manner of means to promote the cause of public education. He traveled abroad to study European, especially German, schools. He marshaled the services of distinguished lawyers, clergymen, college professors, and literary men to address the people under the new lyceum movement that had just been inaugurated. He lobbied skillfully and successfully in the state legislature for the enactment of better school laws, for the establishment of normal schools, and for appropriations of money for state aid. He carried on a famous debate with the organized Boston schoolmasters, who opposed his reforms, and

¹ Kemp's "History of Education," pp. 312 f.

fairly defeated them before the jury of public opinion. Besides all this he wrote voluminously.

His most important literary work consisted of his twelve annual reports. In these he published the large amount of information which he had collected about the actual conditions in public education. These reports were very widely distributed both in Europe and America, and were effective instruments for educating the public not only of his own state, but throughout the whole country, as to the purposes and means of public education in a democracy.

Horace Mann's Reforms. — The following is a list of the reforms that he advocated :

1. Better and more sanitary school buildings, with more hygienic equipment ;
2. Uniform textbooks ;
3. Laws against child labor ;
4. Compulsory attendance ;
5. A longer school year ;
6. The abolition of the district system and the substitution of the township unit (this was not consummated for thirty years, however) ;
7. More secondary schools, and state aid for them ;
8. Public libraries ;
9. State normal schools ;
10. Teachers' institutes ;
11. Better wages for teachers ;
12. The employment of more women as teachers ;
13. The addition of vocal music, history, geography, hygiene, and moral instruction to the course of study ;

14. Better methods of teaching reading and spelling (he opposed the alphabetic and urged the word method);
15. Better standards of instruction, school management, and discipline.

There is a striking similarity between these reforms and the reforms advocated nowadays by aggressive state superintendents and other educational leaders in almost every state. The difference is that Horace Mann was a pioneer. It was like the difference between Columbus' first voyage and crossing the Atlantic now. But his greatness consists not only in the fact that he was a path breaker, but also in the results that he was able to achieve. In most of these reforms he was remarkably successful. One million dollars was invested in public school buildings during his secretaryship; he was able to secure an approximate uniformity of textbooks; as early as 1839 the minimum school year was fixed at six months; he secured the establishment of three state normal schools; and also fathered the teachers' institute. The first compulsory attendance law in America was enacted in Massachusetts in 1852. And he secured at least some gains in almost all the other reforms he advocated. It was largely as a result of Horace Mann's efforts that Massachusetts retained for more than half a century the position of unquestioned leadership among state school systems. The teachers' institutes begun by Mann very shortly became a conspicuous and influential feature of the period. They were usually

summer schools of perhaps two weeks' duration, conducted usually by the county superintendent, and devoted to the review of the "common branches" and to the discussion of pedagogical problems. Though the usefulness of teachers' institutes is now largely a thing of the past because of their utter inadequacy under present conditions, they were a nourishing half-loaf in those early days when otherwise there would have been no pedagogical bread.

Henry Barnard. — The significance of these agitations and reforms would be missed entirely if it were assumed that they were confined to Massachusetts. Mann's leadership, together with the spirit of the times, inspired the whole country to emulate his example. In Connecticut and Rhode Island almost exactly similar reforms were promoted through similar means by Henry Barnard, who later became a national figure in educational reform. (See Chap. VII, pp. 176, 178.)

Other Sections. — The Common School Revival in New England may be taken as typical of what was going on in lesser degree all over the country. It will be remembered that it was not until this period that New York City developed a public school system (see p. 45). Throughout the entire period, the people of Pennsylvania were engaged in a struggle to bring their practice into line with the provisions of their law of 1834 (see p. 46). Some of the counties, especially those dominated by the German Lutherans, were very slow to adopt the provisions of that law,

organize themselves into school districts, tax themselves, and accept the state aid. The last district did not fall into line until 1873. The West, of course, was handicapped by pioneer conditions; yet relatively the mid-western states made commensurate progress also. The struggle for public schools of the New England type, which we saw the West begin in the previous period, continued throughout this period; and by the time the Civil War broke out, the fight had been won. The social system of the South largely retarded her; yet the influence of Mann and Barnard was considerable even there, and the advice of these leaders was often sought. North Carolina began a public school system in 1838. Other states made similar but less successful attempts. When the war broke out, the whole South was on the verge of an important educational awakening. The war of course retarded her later development (see pp. 151, 180, 310).

Other Leaders. — It would also be a mistake to assume that Horace Mann was the only educational reformer of the period. Henry Barnard has just been mentioned. Thomas G. Barrows was the apostle in Pennsylvania of local taxation in response to the state aid law of 1834. Samuel Lewis and Samuel Galloway were the leaders in Ohio, Caleb Mills in Indiana, and Vivian W. Edwards in Illinois; while John D. Pierce was the first state superintendent (1836) in Michigan. Other leaders will be mentioned later. As for Horace Mann himself, he was elected

to Congress in 1848 as successor to John Quincy Adams. He served five eventful years, after which he accepted the presidency of a small, struggling college in Ohio, occupying this post until his death in 1859. His last words are said to have been: "Man, God, duty!"

"Little Men." — It is most interesting to note that Louisa M. Alcott's "Little Men" was in a way an attempt to popularize Pestalozzianism in America. The story was founded on fact, many of the incidents in it being taken from the experience of the author's father, A. Bronson Alcott, who conducted two very unique schools, one at Cheshire, Connecticut, and the other, the famous Temple School, in Boston. Elizabeth Palmer Peabody was at one time associated with Alcott in his Temple School. These schools were managed somewhat along Pestalozzian lines. It appears, however, that Alcott was quite independent and original in his practices; although later he lapsed into a mere expositor of Pestalozzi's method. He was reduced to that by the tragic failure of Americans to appreciate and patronize him; his schools were private ventures, and he was actually driven out of business by the noisy ridicule of the fossil-headed Boston schoolmasters. However, a fascinating side-light is thrown upon the spirit of the New England reform by his daughter's charming story.

Pedagogical Literature of the Period. — During the period between 1835 and 1861 the educators of America,

at least those who read the professional literature, were made familiar with the work of Pestalozzi; though his practices were not introduced into our schools until much later. There were several important educational periodicals in those days: *The American Journal of Education*, later known as *The American Annals of Education*, Mann's *The Common School Journal*, and Barnard's *Connecticut Common School Journal* and later his *American Journal of Education*. These all contained articles about Pestalozzi. Barnard wrote a book entitled "Pestalozzi and His Educational System," which is to this day the best source of information on that subject. The Colburn Arithmetic (see Chap. IV) embodied the Pestalozzian objective method. Lowell Mason used the Pestalozzian analytical method in teaching vocal music in the schools of Boston. John Griscom of New York, Calvin E. Stowe of Ohio, and A. D. Bache, President of Girard College in Philadelphia, all published reports on Pestalozzi and the Prussian-Pestalozzian system. ✓ But the most famous of all was Horace Mann's Seventh Annual Report, which he published after having visited Europe. In it he compared our schools with those of Germany. At that time Germany's schools were far in advance of ours in governmental administration, internal organization, subject matter, and methods of teaching and discipline. Incidentally they were still farther ahead of British schools, which remained on a strictly sectarian basis till 1870. Mann's

controversy with the Boston schoolmasters resulted largely from this report; they were wedded to their old ways, and consequently resented the unfavorable comparison.

Calvin Stowe and the Beginnings of Teachers' Associations. — The Calvin E. Stowe mentioned a moment ago was none other than the husband of Harriet Beecher Stowe, whom he married in 1836, while he was professor in Lane Theological Seminary at Cincinnati. Moreover, his book on "European Elementary Education" was not his only contribution to the Educational Awakening. He was one of the earliest, and, for nearly twenty years, perhaps the most active and influential member of what was in fact, if not in name, the first state teachers' association, namely that of Ohio. The next was that of Massachusetts. Numerous other associations of this sort were organized during the period under discussion; and they contributed very largely to the progress of these times. The National Education Association grew out of the Massachusetts society in 1858.

Rise of the Grading System. — The systematic grading of elementary schools was well started during this period. The old-fashioned district school had its A, B, and C classes in each of the subjects taught. In the cities primary and "grammar" schools had been organized separately (see p. 57). During the first half of the century grammar schools in New England were usually organized on the "double-

headed " system ; that is, each grammar school had two departments, the reading department and the writing department, each with its own program of studies ; but the division was vertical, not horizontal. The pupils attended these two departments on alternate half days. Meantime the primary schools were conducted on the ungraded plan, each in a separate, one-room building. The first step in the evolution of the graded school seems to have been to house the primary school in the same building with the " double-headed " grammar school. A sudden change occurred in Boston in 1848 when the Quincy school was built. This was a four-story building with a separate room ✓ for each of the twelve teachers. " The arrangement of this building enabled Mr. Philbrick, the principal, to work out the details of what, in its essential features, is now the typical plan of organization for city schools of elementary grade." ¹ This new plan appears to have been perfected before 1856. In most other cities the grading came somewhat more slowly. In smaller places there were of course fewer rooms : in villages it was not unusual to find three ; primary, intermediate, and grammar. Thus the grading of schools was well started before 1861, but did not become general till the next period.

There is some dispute as to whether the organization of American schools into eight grades was due to a conscious imitation of the German system. It

¹ U. S. Bureau of Education, Bulletin No. 8, 1916, p. 30.

is certain that numerous writers, John Quincy Adams, Charles Brooks, A. D. Bache, Calvin E. Stowe, Stephen Olin, Horace Mann, Henry Barnard, and others, wrote in commendation of the German system. Leading American educators, including John D. Pierce of Michigan and John D. Philbrick of Boston, recognized the superiority of German education ; and the assertion is frequently made that German influence was peculiarly potent in the organization of our system. On the other hand, the state of Massachusetts, in which the German influence had the largest opportunity to determine the organization, has had a nine-year elementary school until recently, while the eight-year standard now generally prevalent was not established until long after the German influence had subsided.

State and County Administration. — The office of county superintendent came into existence during this period, and by its close, or soon after, was a settled institution in most of the states, except in New England. The county superintendent was usually elected by popular vote, was charged with the certification of teachers, and with a sort of advisory supervision over the schools of the county. This was a decided reform at the time, because it reduced the autonomy of the districts ; but the office needs to be put on a far more professional basis now if it is to escape utter uselessness in the new conditions of to-day. The state superintendency was also created during this period.

This office, together with the codification of school laws, was a further movement away from district autonomy. At the close of the period the little districts still existed but they were no longer entirely autonomous. School directors could no longer maintain as bad schools as they chose. They were now regulated by state laws, they were supervised in some measure by state and county superintendents, and their choice of teachers was limited by county certification. This was one of the great gains of the period. But we shall see later (Chap. VIII) that the time has now come to take another equally long step in advance.

Colleges and Academies. — So far as colleges were concerned this was a period of steady growth but not of revolutionary changes. These came later. At the beginning of the period most of the well-known eastern colleges and universities had already been founded; in the Middle West some of the state universities, and a very large number of small denominational colleges, were started during the period. Great credit is due the religious bodies for the stimulus they gave to higher education; it was one of the outgrowths of the evangelism mentioned earlier in this chapter. The college curriculum did not change materially from that described at the close of the previous period. There was, however, a steady growth in the study of science and the modern languages; and some beginnings were made in political science. For the most part, however,

the German universities were still the goal of the ambitious student's hope. Medical schools had made a beginning in the previous period; the first law schools and the first colleges of agriculture were founded in this. One of the most significant developments of this period was the woman's college, the first important one being Mount Holyoke, established by Mary Lyon in 1836. Its aim was to furnish education of collegiate grade to women. Others were founded prior to 1861.

For the academies this period was high noon.¹ Hundreds of new ones were established, especially in the Middle West, as private or religious enterprises, usually the latter. In the minds of their founders there was not always a clearly conceived distinction among academies, seminaries, colleges, and universities; but notwithstanding the lack of standardization they furnished opportunity, stimulus, and the foundations of an education to thousands who without them would have been left intellectually destitute. By this service they reflected and disseminated the idealism of the time and made a very large contribution to American civilization at this particular stage of its development.

Unfinished Business. — But while this was a period of progress, the student must beware of a false impression. The ideals and ends of the reformers were realized only in part. Only in the best schools had the curriculum been enriched according to the standards

¹ See table, p. 59.

set by Mann. The teaching of physiology and hygiene was the rare exception; United States history, when taught at all, was taught only as advanced reading. It would probably be safe to offer a handsome reward for the discovery of a grandfather or grandmother who learned to read by the word method before the Civil War. The methods of instruction were still memoriter and formal in most schools, and reliance for discipline was chiefly on the birch rod, as octogenarians will testify. Teachers of elementary schools were too often ignorant, and professional training was the rare exception. The primary schools were still separate private institutions in some places; dame schools sometimes performed this service; and we still have a vestigial remnant of this old custom in the responsibility some mothers feel of teaching children their letters before sending them to school. There were ✓ still two short terms, one in the winter and one in the early summer — from which custom we inherit our long summer vacation. Free public schools were far from universal; native-born old people can probably be found in almost any community who remember to have attended schools supported by tuitions or the contributions of a group of neighbors. The charity principle still prevailed in Virginia and the South. School support was meager. The lands granted by Congress for the support of public schools — one section in each township before 1850, and two afterwards — could not be entirely depended upon

at the prevailing low rentals to support a good school ; if sold, as most of them were, the proceeds were insufficient to form an adequate endowment. Cities were still districted. Secondary education was relatively inaccessible as compared with opportunities now offered by the public high schools, and the percentage of illiteracy was high.

The District School. — Even at the outbreak of the Civil War the nation was still largely rural, notwithstanding the remarkable growth the cities had made (see p. 109). Conditions were accordingly primitive, and the one-room district school will pass into history — let us hope, soon ! — as the typical educational institution of the period. It was housed in a one-story frame building about sixteen feet by twenty-four, designed on the simplest possible architectural lines. There were three windows on each side, and an “entry” or vestibule in front about eight feet square. Its furniture consisted of pine desks, well whittled and carved. In the center of the room there stood a big box stove with a cylindrical drum. In the front, a little to one side of the middle, stood the teacher’s desk, also made of pine boards. It had a cavernous interior under the lid for storing the school equipment, which consisted of a box of chalk, a six-inch globe made in halves, with the hinge broken, a register, and a five-inch bell with a wooden handle. Along the wall at the left of the teacher’s desk was the recitation bench, made of a ten-inch pine board, with a leg at



A Spelling Match in the Forties



Friday Afternoon's Speaking Pieces



Passing the Water



Sharpening Quill Pens

TYPICAL SCENES FROM A DISTRICT SCHOOL. From *A School Calendar* for 1919, by permission of the American Book Company, Publishers.

each end and one in the middle. The teacher's chair was held together with wire tightened by twisting. Behind the door at the teacher's right stood another bench on which was a rusty tin water pail and a rusty tin dipper. The blackboard covered the entire length of the wall behind the teacher's desk, but was too high for the little children to reach without standing on the teacher's chair. The tallest boys could reach the top. It was made by painting the plaster black. If there were cracks and holes in the plaster one spliced the writing at that point. The eraser was a block of wood with a piece of sheepskin tacked on one side of it. There were no pictures on the walls. The south windows were curtained with muslin.

Here gathered in summer the barefoot children of the district. There were the primer class; the first, second, third, and sometimes the fourth, reading classes; A, B, and C spelling; A and B arithmetic; and A and B geography classes. Writing was practiced in a "copy book," a collection of twenty-six ruled pages, about eight by ten inches, with a copy at the top of each page, and ten or twelve practice lines below. But each copy usually embodied some worthy maxim, such as: "P Prac. Practice. Practice makes perfect, prac."

The teacher during the summer term was a young woman. In the winter a man teacher was required, since the young men and women of the district all came to school. Then there was a fifth and perhaps

a sixth reading class, and the other classes all had to be relettered to provide for the advanced classes, such as, "Ray's Third Part in Arithmetic." If all went well older pupils "worked through" the arithmetic during the winter, some for the third or fourth time.

Recess and "nooning" were occupied with the old-fashioned games, indoors or out, depending upon the season and the weather. Of course a few minutes were required at noon to bolt the cold lunches from the dinner pails. Friday afternoon the school "spelled down." In many districts the schoolhouse was a social center where the neighborhood gathered of winter evenings for debating societies, singing schools, spelling matches with other districts, basket socials, or the religious revival services known as "protracted meetings." Many a romance has been woven around these social events, and many a tender sentiment associated with this dearly remembered institution is celebrated in song or verse. But the sentiments, however tender, have now become an obstacle to progress. The district school served its day and generation worthily, but that was the day of the ox cart, the flail, and the weekly newspaper. The present is a new age; and the new age has no more urgent need than for a new rural school.

Consolidation. — Strange as it may seem, the period between 1835 and 1861 had its consolidation problem, as we do now; except that it was a city school problem then, rather than a rural school problem, as it is with

us to-day. The district system had been used in the cities, the same as in the country (see p. 18). When a city grew large enough to be divided into wards for political purposes, the wards were, if the people so elected, organized into school districts. Each district maintained an independent, ungraded district school. Each ward district had its own school board, and levied its own taxes. As time went on, the inadequacy of this arrangement became evident. It permitted the slums of the rapidly growing cities to become breeding places of ignorance and crime. The first city superintendent of schools in the United States was appointed in Buffalo in 1837 to unify and supervise the district schools of that city, then a town of 15,000 people. The following table¹ shows the growth of this movement:

DATE OF FIRST APPOINTMENT OF CITY SUPERINTENDENT

Buffalo, N. Y.	1837	New York City	1851
Louisville, Ky.	1837	San Francisco, Cal.	1852
Providence, R. I.	1839	Jersey City, N. J.	1852
Springfield, Mass.	1840	Newark, N. J.	1853
New Orleans, La.	1841	Brooklyn, N. Y.	1853
Rochester, N. Y.	1843	Cleveland, O.	1853
Columbus, O.	1847	Chicago, Ill.	1854
Syracuse, N. Y.	1848	St. Louis, Mo.	1854
Baltimore, Md.	1849	St. Joseph, Mo.	1854
Cincinnati, O.	1850	Indianapolis, Ind.	1855
Boston, Mass.	1851	Worcester, Mass.	1855
Gloucester, Mass.	1851	Milwaukee, Wis.	1859

But it is interesting and significant that city consolidation was usually effected only after a vote of the

¹ From Cubberley's "Public School Administration," p. 58.

people, preceded by a bitter fight between those who favored and those who opposed consolidation — just as happens in rural townships now. And it is equally significant that, chiefly because of consolidation which the cities achieved so long ago, the cities have been at least a generation ahead of the open country in educational progress.

Three Principles. — Out of the agitations, debates, and legislative contests of the great educational awakening, there emerged three principles of American education, which were apparently settled for all time to come.

1. Support by Taxation. — The first is the principle of support by taxation. It was well expressed by Horace Mann as follows: “The property of the commonwealth is pledged to the education of all the youth up to such point as will save them from poverty and vice, and prepare them for the adequate performance of their social and civil duties; and the successive holders of this property are trustees, bound to the faithful execution of their trust by the most sacred obligations.”

The “Bachelor Argument.” — This principle was of course bitterly contested by the wealthy taxpayer of the period. His objection is sometimes known as the “bachelor’s argument”; inasmuch as the wealthy man, like a bachelor, pays taxes for the education of other people’s children. It shows what immature ideas of democracy were then entertained. Un-

fortunately, they are not entirely discarded yet. These objectors apparently assumed that democracy means privilege ; they did not recognize that it means responsibility also. They were extreme individualists, too ; they did not recognize the principle of social solidarity, upon which democracy depends ; which means that the welfare of each is dependent upon the welfare of all. We all understand now, as only the wisest leaders did then, that the success of democracy depends upon the education of all. Democracy dare not permit children to grow up in ignorance just because their parents happen to be too poor to pay tuition for them. Such ignorant children are liable later to become a menace to the whole body politic. They must be educated ; if their parents are too poor to do it, then their education must be paid for by taxpayers who do have the financial ability. This is the same principle by which a democracy requires, and justly, that its young men of greatest physical ability fight its battles. This nation answered the " bachelor argument " once for all in the debates, like those in Pennsylvania, of this period. It still remains, however, to make further application in our own day of the principle of financial obligation decided upon then. It may not prove sufficient now to furnish free tuition only. In order to assure all citizens sufficient education to prepare them for citizenship, it may prove necessary to-day to furnish them free books, free transportation, free noon meals, and even free school uniforms.

Indeed we must apply the principle still further. In the debates referred to above our young democracy decided that families may not be left in ignorance because of their poverty. We are now beginning to see that neighborhoods cannot with safety to the body politic be similarly neglected. The state as a whole must assume the responsibility of equalizing educational opportunities throughout the state. Further: the poorer states of the Union must not be permitted to remain centers of ignorance; the wealth of the whole nation, wherever its owners reside, must be put at the disposal of the Federal government for the equalization of educational opportunities throughout the length and breadth of the land. The "bachelor argument" of wealthy states must not be allowed to prevent sufficient Federal aid. All this was being settled in principle as far back as the period between 1835 and 1861. It only remains now to make further quite consistent and clearly needed applications of the same principle. However, it is to be expected that the wealthy will still contest its extension.

2. Secular Control. — The second principle is that of secular control. The dominant institution of modern society is the state, not the church; the aim of education is primarily civic, not religious; and therefore the control of education by the state cannot be interfered with. Church control of schools would mean as many different kinds of schools as there are sects; and the unity necessary to a great democracy

like ours would be utterly impossible. Such chaos would eventuate if patrons of parochial schools were excused from the support of public schools, or if public-school funds were disbursed to parochial schools. This principle was settled once for all in the debates of Horace Mann and his contemporaries.

The "Godless Schools" Argument.—The "Godless schools" argument was first urged against the reforms of Horace Mann by the conservative Congregationalists, and those of kindred faith, in Massachusetts. They contended that the development of free public schools was an attempt to eliminate the Bible from education, and to set the school against the church. This was one of the bitterest fights of Mann's career. The question came up again in New York City when the Baptist and Catholic churches demanded the same benefit from local taxes that the Free School Society was receiving (see p. 45). The Catholics carried the fight to the state legislature, with the result that not only were the sects denied subsidies but the society as well. And among the most bitter opponents of the Pennsylvania law of 1834 were the German Lutherans, as we have seen (see p. 47). It was due largely to their conservatism that the state was so slow in coming to the new basis.

3. State and County Supervision.—The third principle involved curbing the independence of the local districts. Gradually the districts came under the control of authorities higher up. County and state

superintendents of education were created; and the districts became less and less a law unto themselves. The rise of the city superintendency has been referred to (p. 137); the accompanying table shows the growth

THE EXTENT OF STATE AND COUNTY SUPERVISION IN 1861	COUNTY SCHOOL OFFICER	STATE SCHOOL OFFICER
Alabama . . .	✓	✓
Arkansas . . .	✓	
California . . .	✓	✓
Illinois . . .	✓	✓
Indiana . . .		✓
Iowa . . .	✓	✓
Kansas . . .	✓	✓
Kentucky . . .		✓
Louisiana . . .		✓
Maine . . .		✓
Massachusetts .		✓
Michigan . . .		✓
Missouri . . .	✓	✓
New Hampshire	✓	
New Jersey . .		✓
New York . . .	✓	✓
North Carolina .		✓
Ohio . . .	✓	✓
Pennsylvania . .	✓	✓
Rhode Island .		✓
Texas . . .		✓
Utah . . .		✓
Vermont . . .		✓
Wisconsin . . .		✓

that county and state superintendency had made by 1861.

The "Local Self-Government" Objection. —

The chief argument against this centralizing tendency was the "local self-government" slogan. Local self-government was regarded by our early statesmen as a cardinal principle of civil liberty. But they pushed it to extremes. The success of any society, especially of a great democracy, depends upon a community of interest. There must be a unity of ideals and

opinions, otherwise there can be no harmony of action. If localities or classes have discordant interests there will be friction. A degenerate class, group, or locality becomes a menace to the whole. We learned this lesson anew from our experience during the World War

when we found that un-American elements in our population were a source of serious trouble.

Since education is the great unifier, it follows that no group or locality can be permitted to have as poor schools as it happens to desire. Each must be brought up to standards by some central authority. Complete local autonomy is inimical to the unity upon which democracy depends. This our fathers gradually came to see; and especially as the railroad and the telegraph increased facilities for communication and made the tiny communities of the older day things of the past. Hence the gradual rise of county and state supervision.

Solidarity. — The reader will observe that these three principles are fundamentally one, namely, like-mindedness is necessary to democracy. The good of all is bound up with the good of each; and social solidarity is menaced by discordant diversities. The fundamentals of democratic civilization must become the mental possession of each citizen. Our forefathers saw that neither poverty nor religion nor location could be allowed to interfere with the American school's task of producing like-mindedness.

Instead of arguing out again the principles which they settled we must push much farther the general principle of producing like-mindedness through our schools. Diversities among us tend to increase under modern conditions. Our people represent a great variety of races, languages, traditions, religions,

vocations, standards of living, moral ideals, social theories, and political views. Sectional interests are almost as various as they ever were. Employers, laborers, and the public are set over against one another. There are centers of un-American, even anti-American, influence. If these diverse elements are to be fused together into a harmonious American citizenry, there must be a great increase in the schooling that is common to all. To get this, we shall have to have more centralization; that is, more control and support from state and Federal governments. This centralizing tendency has been developing ever since 1861 (pp. 177, 208-215), but it must be carried still further. To those in whose minds local self-government is still a fetish, the mere word "centralization" is an argument. To those who understand the lessons of history, it is only a word. Persons and classes who have sectarian, financial, or other selfish reasons for opposing national unity cry "centralization" with hypocritical gestures of alarm. But teachers at least should understand the lessons of history (see pp. 313, 322).

Foreign Education. — There was no such great educational awakening in Europe during this period, except in Norway, where a system of public elementary schools, supported by the public authorities, was established during the third decade of the century. Germany invented her continuation school (see Chap. IV, p. 72), to supplement the limited education of the peasants. It is based on the assumption

that the laboring classes have no claim to secondary and higher education of the cultural type; an assumption that we must be very careful not to copy here in America. It will not serve the needs of democracy to import a half-loaf, part-time school for "those who have to leave school early." They must not be permitted to leave school early — not in America! England began government grants to, and inspection of, her parochial and private (*i.e.* "voluntary") schools; but she made no further movement toward a real public system. In France an abortive effort was made, under Guizot, to establish a system of elementary schools (1833); but the reactionary laws of the Second Empire undid (1850) what had been accomplished. Democratic education was making slow headway in Europe!

CHAPTER VII

THE TRANSITION PERIOD, 1861-1890

THE events of the thirty-year period just following the Civil War could not possibly have been understood by the generation that participated in them. Even now they can be understood only by those who foresee what the social order is to be into which the world is now about to enter, certain features of which we shall attempt to sketch in our closing chapter. It was a period when future events were casting their shadows before them; and men, without knowing it, were laying the foundations of new institutions that they could not anticipate.

Industrial Development. — It was a period of amazing industrial advancement. Railroad mileage was increased to 163,000 miles. The United States began pushing rapidly forward toward the place of primacy that she now occupies in all sorts of manufactured products. By 1890 the free land of the west was practically all occupied, and settlement was pushing into the dry belt. Although rented farms were as yet relatively few, nevertheless tenancy and absentee landlordism, fundamental problems to-day, were beginning to appear. Immigration from Europe was

assuming sufficient proportions to attract attention and arouse misgivings. Because of the growth of manufacturing and transportation American cities made a remarkable development during the period. Speculation in land, stocks, and commodities may be said to have begun. The complex problems of money and credit forced themselves upon Congress. The telephone was invented and rapidly grew in popularity. Medical science made rapid strides and scores of new inventions contributed to the comforts of life and to the economy of time.

The first great trusts and business combinations appeared then. Mr. Rockefeller built up the oil business during and just after the war, and the Standard Oil Company was organized in 1882. Mr. Carnegie was similarly laying foundations in the steel business. It was the period of cutthroat railroad competition, which, before 1890, resulted in the inevitable pools and combinations to check it. Sugar, tobacco, whisky, salt, and other industries were drifting in the same general direction. Students of economics now understand that all this industrial combination was the inevitable result of large scale industry, which the steam engine and other inventions had made necessary. Some of these industries, notably steel and railroads, were, for this reason, foreordained monopolies, just because they involved large investments.

Labor as well as capital was beginning to organize; the American Federation of Labor appeared in 1881,

and soon had a million members. Nearly 10,000 strikes are recorded in the last ten years of this period. The farmers of the west and northwest, in the stress of their transition from wheat to diversified farming, produced first the Granger movement of Iowa, Wisconsin, and Minnesota, and then the Populist organizations of Kansas and Nebraska. Other movements, such as the Greenback Party, reflected this general tendency of organized protest against existing conditions.

The statesmen of the period were of course blankly ignorant of the new economic forces with which they were dealing, and hence utterly without foresight as to the outcome of the events they were witnessing. They busied themselves with enacting laws against such combinations — the Interstate Commerce Act of 1887 and the Sherman Anti-Trust Act of 1890. These laws “roared at them [the trusts] like any turtle dove.” Meantime, without letting their left hands know what their right hands were doing, they nursed the “infant industries” on the high tariff, which protected them from foreign competition. This policy tempted and incited people of selfish aims to exert increasingly that invisible influence at Washington, against which we wonder now that the very stones did not cry out. But the public eyes were holden then, and almost another generation elapsed before the “era of exposure” began. To us the events of that period mean that there was just taking form

the great new world in which we are now living, with its vast industrial organization, its fearsome economic and political problems, and its social classes glaring at each other with lowering visages. If our sons succeed in solving these problems they will be able to understand that germinal period better than our fathers possibly could, even though they lived right through it themselves. But our sons will not solve those problems without a great deal of information that our fathers had no opportunity to acquire.

Moral and Religious Changes. — It was a period of equally significant changes in the spiritual aspects of American life. Moral ideals and religious beliefs were changing. A reaction occurred in the temperance reform. There were several reasons for this. In the first place war usually has a tendency to break down the restraints of vice. In the second place, an internal revenue tax was imposed on alcoholic beverages, and this policy protected the distilling and brewing interests against popular attack. In the third place, there occurred a great wave of immigration from Europe where no reform had occurred. As a result the gains previously made in temperance sentiment were lost, temporarily at least.

The era was also one of unscrupulous political practices. The reconstruction problems were handled in such a way as to insure the victory at the polls of the party in power; but with very little effort to devise a just and wise treatment of the reorganized

South. Business interests used improper methods of securing tariff benefits from Congress.

In the field of religion doubt and skepticism grew rapidly. The doctrine of evolution began to reach the thinking classes generally, as did also the scientific method of studying the Bible. Questions were raised that the old theology could not answer. At the same time popular agnosticism produced such spokesmen as Robert Ingersoll. The conflict between science and religion was soon on in full blast. The result was that some of the old religious doctrines were taken seriously by a constantly declining percentage of the people. Hence the religious revival of an earlier generation gradually dwindled till the old evangelism lost much of its former power and influence. Few could then foresee that the stage was being cleared for a new religious life full of zeal to apply the Golden Rule to business, politics, and international relations. Foreign missions were growing phenomenally — the missionaries were unconsciously preparing the way for international brotherhood.

Writers also had taken up new themes; the idealism of the earlier period was wanting; literature consisted chiefly of fiction which described the life of the people in various parts of the country. It was like a boy at that stage of his development when he is exploring the environment in which he lives; by its aid Americans were getting acquainted with other parts of their country and with the people who lived there. Only exceptional

writers foresaw that social problems were arising with the new prosperity. Thus on its spiritual sides life was filling up with questions hard to answer. The desire for answers created a demand for more knowledge, for only by knowledge can the deep questions of life be answered.

The South. — The South entered upon the period crushed by the war. Its resources were exhausted, its industry entirely dislocated, and its social system disorganized. The Herculean task of the period may be summed up in the word, Reconstruction. By 1890 this task was fairly accomplished; and the New South had emerged. Agriculture had achieved a new footing; modern industrialism was beginning to appear in such typical forms as iron manufacture in Birmingham and cotton mills in South Carolina. Society had been successfully reorganized, and a distinctive literature produced.

Educational Readjustments. — If there has ever been anything in American history that may be thought of as providential it is the way our fathers laid out the foundations of a new education the ultimate need for which they could not foresee. We are now confronted with the most serious social problems. Ours is an era of crises. If the problems of the vast social reorganization we are just entering are ever to be solved, and if the new era is to fulfill its promises, that consummation will depend more upon universal liberal education than upon any other single factor, — more

perhaps than upon all other factors combined. As if our fathers "unconsciously realized" that need in advance, they made the excavations and built up the foundations for the new types of educational institutions without which orderly social readjustment and progress in the present crises would be hopeless. This foundation and the story of its laying we shall now sketch.

The Rise of the High School. — Perhaps the most important educational necessity of the new era will be universal secondary education. Our civilization has now become so complex, so many vocations require special skill and knowledge, and we are perplexed by so many questions, public and private, political and social, industrial and spiritual, that liberal education is necessary for everybody. High school education is the "minimum essential," for citizenship. Now it was in the period under discussion in this chapter that the foundations of the American high school were laid. The old academies, which still persisted, of course, were private institutions somewhat akin to the secondary schools of Europe, especially of Germany, where it was practically impossible for children of the common people to enter them. American academies almost invariably charged tuition; and they were so few that attendance at them usually involved the additional expense of boarding away from home. The high schools were destined to remove these obstacles, and to furnish free secondary education

at the pupil's very door. This was to be something new under the sun, a sheer innovation on the part of democracy. There were few such institutions before the Civil War, although the movement began as far back as 1821, with the establishment of a public high school in Boston. In 1870 the number of public high schools had increased to 160, by 1880 there were nearly 800, in 1890, 2800. The rate of increase has continued, and the end has not yet been reached. But the point is that this was the time of beginnings.

Typical Curriculums. — The curriculums of the early high schools followed closely the "finishing" rather than the "fitting" programs of the academies. This means that the high schools for a long time were not primarily preparatory schools for the colleges, but rather schools which emphasized a practical preparation for life. The following program of the Roxbury, Massachusetts, High School in 1872 shows that this tendency persisted for a half century after the establishment of the first high school:

FIRST YEAR

1. Review of preparatory studies.
2. English Literature, including Biography, History, etc.
3. Composition, including Penmanship and Punctuation.
4. Reading and Declamation.
5. Natural Science, — Mineralogy and Natural History.
6. Physical Geography.
7. Algebra, — Sherwin's.
8. Commercial Arithmetic.

9. French (Grammar, Translation, and Conversation).
10. Drawing.
11. Vocal Music.
12. Military Drill and Calisthenics.
13. Latin (elective).

SECOND YEAR

Numbers 2, 3, 4, 7, 9, 10, 11, 12 of the above list continued.

14. Physiology with Intellectual and Moral Philosophy.
15. Geometry.
16. Rhetoric.
17. Bookkeeping.

THIRD YEAR

Numbers 2, 3, 4, 9, 10, 11, 12, 16 of the above lists continued.

18. Natural Philosophy.
19. Astronomy (with practical study of the heavens).
20. Trigonometry with its applications.
21. Botany.
22. Constitution of the United States.
23. Navigation.

FOURTH YEAR

1. Mental Philosophy.
2. Chemistry.
3. Geology.
4. French.

Pupils entered this school as early as the age of twelve, after passing satisfactory examinations in spelling, reading, writing, English grammar, arithmetic, modern geography, and history of the United

States. From the announcement one would gather that it was the exception for pupils to remain after completing the third year.

This Roxbury course of study may be taken as a sample of one of the most progressive high schools of the times. On the other hand the high school of a small middle-west village, in the later eighties, had a program the first two years of which consisted of the "common branches," including civil government and bookkeeping; and the last two years, of the following subjects, each running through the entire year.

THIRD YEAR	FOURTH YEAR
Algebra	Geometry
Rhetoric	Literature
Physical Geography	General History
Natural Philosophy	Botany

These subjects were taught with the most careful attention to detail, however; and a genuine reference was inculcated for morality, religion, sincerity, thoroughness, industry, knowledge, literature, patriotism, and the best American traditions.

Enrichment of the Elementary Curriculum. — The growth of the high school was significant chiefly because it provided larger opportunities for the common people. It pointed forward to the time when all the people should be liberally educated. But there was another movement that pointed in the same general direction; namely, the enrichment of the elementary curriculum.

Something more than the "three R's" was henceforth to be the program of the people's schools.

The first new subject to be added was history. Long before the Civil War United States history was taught in many elementary schools; but it was during and immediately after the war that it came into general use as a means of stimulating patriotism and loyalty to the Union. This marked a distinct stage in the development of training for citizenship. The practice of using a history text as a reading book gradually passed away, and the meager outlines of United States history became established in the upper grades. Another distinct stage in civic education came toward the close of the period with the introduction of civil government. It was felt that candidates for citizenship should understand the machinery of the government they were to live under and help operate. At present we are taking another equally distinct step toward recognizing that young people will presently have to vote and help formulate public opinion and that in consequence they must be educated to understand economic and social problems.

Physiology was introduced during the Transition period as were also nature study and drawing, both of which came partly as a result of the Pestalozzian influence. In fact physiology grew out of nature study as developed by Sheldon. (See p. 167.)

Instruction in the fundamentals of music also became quite common.

Manual training originated in Finland and Sweden, where it was called "sloyd." The originators of sloyd were directly indebted to Froebel for their idea; so that our manual training is strictly Froebelian, not Pestalozzian, in its origin and theory. Sloyd was exhibited at the Centennial Exposition at Philadelphia in 1876, and was thence introduced into our schools. Prior to 1890, however, it was adopted into only a few of our most progressive institutions.

The teaching of bookkeeping, shorthand, typewriting, and other so-called commercial subjects was mostly conducted by private enterprise. Numerous "colleges" of this character were started during the period. The rudiments of bookkeeping were usually taught in public high schools, but not till long after did these schools enter the field occupied by the private business colleges.

Closely related to the enrichment of the elementary curriculum was the introduction of Pestalozzian methods, inasmuch as the Pestalozzian object teaching brought in a "wealth of work with Nature, the study of plants, animals, soils, minerals, the air we breathe, and the water we drink, the color exercises and form studies, the manual training and physical culture, which form the main features of progressive schools all over the land to-day." The discussion of Pestalozzi's influence in America comes more logically later (pp. 166, 233).

The Grading System. — Still another closely related improvement in elementary education was the grading of schools, which was completed and universalized

during the Transition period. Indeed, it was carried to extremes. The object, of course, was to increase the size and so reduce the number of classes. Something of this sort had to be done if schooling was to be furnished free to all. It was also designed to secure the administrative harmony and convenience that would arise from having class groups alike in all subjects. Besides it had the appearance of order and simplicity — a fallacy which pedagogues are wont to wreck upon. As a matter of fact nothing human is simple and uncompounded. School grading as developed in the last third of the nineteenth century was unquestionably a net gain, indeed a necessity to democratic education; but we now realize that it can be overdone; and that, like the Lancasterian system three quarters of a century earlier, it often sacrifices the human spirit to mere mechanics. In the one-room rural school grading is reduced to sheer absurdity, for there it actually increases rather than reduces the number of classes, and so imposes upon the teacher a daily schedule that is utterly impossible.

So much for the enrichment of elementary and secondary education. The enlarged foundations of the new education appear also in the extension and enrichment of higher learning.

The Demand for Science Teaching. — There was a steady but no revolutionary growth in the number and size of colleges; the radical change in higher education during this period was in the extension of

science teaching. This resulted from causes the most important of which was the multiplication of scientific discoveries and the practical applications of them to the arts of life and industry. Graves summarizes this development as follows :

“The invention of the cotton gin (1792), the reaping machine (1834), the vulcanization of rubber (1837), the sewing machine (1846), the cylinder printing press (1847), and the typewriter (1868) greatly reduced the cost of labor, increased the amount of production, and made new industries possible. By the use of anthracite (1812), the introduction of friction matches (1837), and illumination through petroleum (1853), and incandescent electricity (1879), the conveniences and comforts of life were greatly enlarged. The steamboat (1807), improved by the screw propeller (1839) and the steam turbine (1884), and the locomotive (1830) linked all parts of the world together. The telegraph (1837), the submarine cable (1842), the telephone (1876), and wireless telegraphy (1897) made communication between all places almost instantaneous. Warfare became infinitely more destructive and unprofitable through such inventions as the Gatling gun (1861) and smokeless powder (1895). The invention of the stethoscope (1819), the production of anæsthesia through the medium of nitrous oxide (1844), sulphuric ether (1846), and chloroform (1847), the perfection of antiseptic surgery (1867), and the discovery of inoculations for hydrophobia (1885), tetanus (1892), diphtheria (1892), and other diseases contributed largely to the progress of humanity.”

All these inventions and discoveries made the study of science in modern schools absolutely necessary, and therefore inevitable.

Spencer's Famous Essay. — However, the attention of thoughtful people was focused upon this necessity through a now famous essay by Herbert Spencer, the great English philosopher. The title of the essay was "What Knowledge is of Most Worth"; and it appeared in 1861. Spencer began, as all such studies must, by stating the aim of education. Complete living was his answer to the problem; which meant living in such a way as to satisfy all the various needs inherent in human nature. Complete living, he went on to show, involves five different sorts of activities, which he specified as follows:

1. Those activities which directly minister to self-preservation;
2. Those activities which, by securing the necessities of life, indirectly minister to self-preservation;
3. Those activities which have for their end the rearing and discipline of offspring;
4. Those activities which are involved in the maintenance of proper social and political relations;
5. Those miscellaneous activities which make up the leisure part of life, devoted to the gratification of the tastes and feelings.

As preparation for these five sorts of activities the following sciences are required, respectively:

1. Physiology.
2. Mathematics, physics, chemistry, biology, and sociology.
3. Physiology, psychology, and ethics.

4. History, in its political, economic, and social aspects.

5. Physiology, mechanics, psychology, as a basis for art, music, and poetry.

The inference from this analysis is obvious:—if the schools are to prepare for complete living they must teach all the subjects necessary to complete living. This analysis has not outlined its usefulness. In particular, Spencer's statement of the aim of education is better than the statements of aim too often found in current theories.

Others, especially Huxley, published similar essays at about the same time, but none were so influential as Spencer's.

The Elective System. — But the chief obstacle that confronted the advocates of science teaching was the fact that programs of study, in both secondary schools and colleges, were so largely made up of required subjects. Some beginnings were made in the elective system prior to this period; but the greatest impetus was given to it when President Eliot, at Harvard, introduced complete freedom of electives in 1869. This was found to be too radical a measure, and has had to be somewhat modified since. However, Harvard's example was widely imitated, with the result that the doors were thrown wide open to scientific subjects, which have since gained the ascendancy almost everywhere.

The real value of these changes was not only in the

introduction of the sciences but in the breaking down of the old classical requirements. However much good there was in the study of Greek and Latin, there was no little harm also. Too often the result of requiring the dead languages was to keep students' faces turned toward the past, and so prevent their studying the problems of the age in which they lived. The vast majority of supposedly well educated people now living who have reached or passed middle life are shamefully ignorant of economics and sociology. Hence they are either blind to the existence of social problems or else they are stubborn reactionaries. Being college graduates they are looked up to as intellectual leaders; but their ignorance is a very serious obstacle to progress. The recognition of the natural sciences as worthy elements of a college education opened the way to a fairly complete modernization of the entire program of studies, — elementary, secondary, and advanced, — upon which we have so far proceeded. Without this modernization of subject matter, public education would be utterly inadequate to the needs of democracy in the complex environment of to-day and to-morrow.

Teaching Agriculture. — One of the very significant developments of the Transition Period was the rise of scientific agriculture. This had its beginnings in the first half of the nineteenth century. The first of the state agricultural colleges (that of Michigan) was opened in 1857. The great impetus to the development of these institutions, however, was furnished by

the famous Morrill Act of 1862, which appropriated to the states large grants of land for the promotion of education in agriculture, the mechanical arts, and the natural sciences. The agricultural college movement, stimulated by those generous national bounties, spread rapidly, and every state now has one or more institutions of this type, which, because of their origin, are often spoken of as the "Land-Grant colleges." The Second Morrill Act, passed in 1890, appropriating a continuing money-grant to each state for its agricultural college, and other subsequent appropriations have greatly increased the resources of these institutions. In 1885 Congress passed the Hatch Act, which provided for the establishment of agricultural "experiment stations" in connection with the colleges, and thus promoted the research and investigation necessary to build up a sound body of knowledge concerning the important art of agriculture.

The Learned Professions. — Marked advancement was made during this period in professionalizing the professions. During the first three quarters of the nineteenth century it was still customary to learn both medicine and law, but especially the latter, by the apprentice method, and outside of New England even educated clergymen were rare. Boone mentions only six law schools prior to 1850, but suggests that there may have been a dozen in all. "Within the next ten years the number of institutions had doubled; in 1872 there were thirty schools, reporting two thousand

students"; and by 1890 the apprentice method of preparation was largely discredited. The period of industrial expansion following the Civil War gave rise to a new profession, namely engineering. The following list of institutions, with the dates of their founding, will indicate the growth of this new line of education.

1824 Rensselaer Polytechnic Institute (Troy, New York),

1847 Lawrence Scientific School (Harvard),

1847 Sheffield Scientific School (Yale),

1861 Massachusetts Institute of Technology, Boston, Massachusetts,

1865 Worcester Polytechnic Institute, Worcester, Massachusetts,

1866 Lehigh University, Bethlehem, Pennsylvania,

1874 Towne Scientific School, University of Pennsylvania,

1880 Case School of Applied Science, Cleveland, Ohio,

1883 Rose Polytechnic, Terre Haute, Indiana,

1889 Polytechnic Institute of Brooklyn, Brooklyn, New York.

Professionalizing Teaching. — Considerable advance was also made in the matter of putting teaching on a professional basis. Most of the modern state normal schools, except, of course, in the newer states, were founded either just before or during this period. The first permanent college chair in education was established at the University of Iowa in 1873, and was

occupied by Rev. S. N. Fellows. Boone, writing in 1889, states that seven similar ones had since then been started, at Wisconsin, North Carolina, Johns Hopkins, Ottawa, Kansas, Indiana, Cornell, and the College of the City of New York. But the number of teachers who availed themselves of these advantages, either in colleges or normal schools, was relatively small. Certification requirements were low. As late as 1894 a teacher's examination in Iowa consisted of a few easy questions on the "common branches." No knowledge of pedagogy was expected. As a speaker said at the Minneapolis meeting of the National Education Association, in 1872, "The vast majority of teachers have not even the aid of an occasional swelter in an August vacation-school institute: too often only an educational picnic."

Beginnings of the Science of Education. — Nevertheless the foundations for a science of education were being laid. Wundt, at the University of Leipzig, founded the first psychological laboratory in 1878, and its influence reached America within the next decade. Psychology was taught in many of the leading colleges, but the less progressive schools still held to its metaphysical prototype, "mental philosophy." Ladd, of Yale, published his "Principles of Physiological Psychology" in 1887; James's "Principles of Psychology" in two volumes appeared in 1890. G. Stanley Hall was already teaching psychology and child study at Johns Hopkins University, Baltimore, during the

eighties, though his important publications did not appear till later. Perhaps the most influential, if not the most scientific, exponent of psychology during the period was William T. Harris. Harris was a profound student of history and literature, but especially of philosophy. He brought his knowledge and his keen insight to bear upon an educational theory, which he



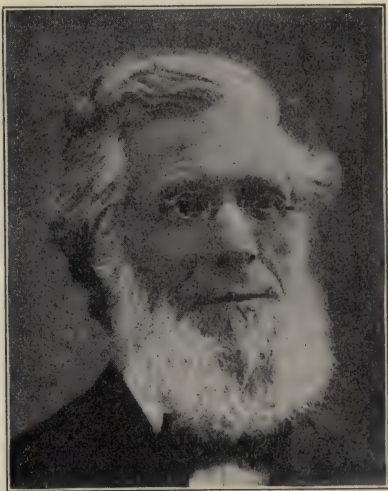
WILLIAM T. HARRIS

not only evolved but applied to all his work. He was for many years Superintendent of Schools in St. Louis, and the annual reports that he prepared were undoubtedly the most important educational publications of that time. He later became Federal Com-

missioner of Education. Lester F. Ward's "Dynamic Sociology" appeared in 1887; but his remarkable theories as to the social function of education have received but little attention on the part of educators until very recently.

Pestalozzianism: E. A. Sheldon. — What Professor Parker declares to be the most important step during this period in the development of better methods in elementary education was the introduction of Pestalozzianism into the Normal School at Oswego, New York. Edward A. Sheldon, who was responsible for

this movement, was himself a man of Pestalozzian temperament. In 1848 he organized a "ragged school" for poor children. Later he became superintendent of the public schools of Oswego. In 1861 he organized the training class for teachers in the Oswego schools and in 1863 it became a state Normal School. In his efforts to introduce Pestalozzian methods Sheldon imported two teachers from Europe, Miss Margaret E. M. Jones, who had taught in an English Pestalozzian school, and Hermann Krüsi, Jr., a son of one of Pestalozzi's assistants. He also gathered about him a group of strong personalities capable of appreciating and exemplifying the Pestalozzian ideals and methods, and of imparting to their students a zealous enthusiasm for education. His remarkable leadership may be judged from the fact that the assistants he imported from Europe were brought with the permission of his board on condition that they would not cost the city a dollar; whereupon his teachers subscribed to their support, in some instances to the half of their salaries.



EDWARD A. SHELDON (1832-1897)

The most valuable feature of Pestalozzianism that Sheldon introduced at Oswego was the objective method. He demonstrated the Pestalozzian plan of developing the faculties by means of lessons on objects, animals, plants, form, size, number, color, place, and drawing, together with various physical exercises. "Every step taken was carefully gauged to childhood's nature. The teacher tried to see everything through the child's eyes; the center of gravity in the world of instruction was transferred from the teacher's personality to that of the child; so not only the subject matter, but the method and spirit, of all elementary instruction was vitally changed for the better in all schools touched by Oswego influence."

The Oswego Movement. — The Oswego innovation consisted in putting the Pestalozzian theories into practice. Educators knew about them, for, as we have seen, much had been written about them during the period of the Great Educational Awakening. But as John D. Philbrick, then Superintendent of the Schools of Boston, wrote: "Our theories may be sound, but they cannot work out themselves. The Pestalozzian principles have long been familiar to the leading educators of this country; and yet they have made little progress in our primary schools, for want of teachers to apply them." By putting Pestalozzi's principles into actual practice, and training teachers in their use, Sheldon made a very important contribution, and probably deserves to rank next to

Horace Mann as an educational leader of his day and generation.

The New Normal Schools and the Oswego Idea. — The Oswego idea was the usual subject of discussion at teachers' conventions for a number of years. In this way it was spread abroad. But chiefly it was carried to new normal schools by Oswego graduates. In 1860 there were not more than twenty normal schools. Scarcely half of these really deserved the name. The Oswego Normal School was the only one in which practice teaching had been successfully featured. In 1871 the Commissioner's Report enumerated one hundred and fourteen normal schools, but no doubt this number is deceptive, because of the nondescript character of some of the schools. By 1895 there were three hundred and sixty-five normal schools, of which one hundred fifty-five were public institutions. In a very important sense Oswego was the mother of many of these new schools. In most of them the Oswego idea was definitely copied; and Oswego graduates were employed in very many of them. In his little book on "The Oswego Movement," Andrew P. Hollis quotes from letters, addresses, and other documents to show in detail where these graduates were employed. The list of schools would be too long to enumerate here, but they include representative, and often leading, schools in New York, Pennsylvania, the entire Middle West, and far West, and eventually the South. By the close of the period the Pestalozzian objective method,

with nature study, elementary art, handwork, and physical exercise, had become an intrenched practice in all the normal schools of the country.

However, the reader must beware of forming an exaggerated notion of the effect that this movement had upon the common schools; he must remember that after all the percentage of teachers in the common schools who were normal-school graduates was very small. Most middle-aged readers will recollect the instruction received in their childhood as distinctly un-Pestalozzian in character.

There was one feature of Pestalozzianism, the analytical method (see p. 81), that received a very unfortunate emphasis. This method was based upon the mistaken theory that the elementary parts, into which a usable whole can be analyzed by adults, should be thoroughly drilled upon by children who are beginning to learn. For a time this fallacy pervaded the teaching of nearly all the common 'branches. It encouraged the alphabet-syllable method of teaching reading. In writing children were drilled upon the lines and curves of which letters are made up. Naturally they lost interest in this drill because it was so long before they were permitted to write words. In arithmetic a man named Grube devised a method by which children were supposed to learn all about the numbers under ten, and their combinations, before they were permitted to take up the larger numbers,—and later progress proceeded by steps of ten. In

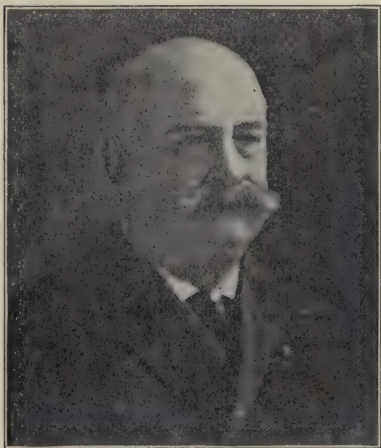
drawing children were drilled on certain type solids (see p. 240) without being allowed to draw objects from life. In music they were drilled interminably on scales and note reading; it was considered a sin to let them play complete pieces that they liked, and songs were rarely a part of singing lessons in school. This theory prevailed pretty generally till about 1890, after which the reaction began to set in.

The Kindergarten. — Froebel's influence also was being extended to the United States. The manual-training movement has already been mentioned. The kindergarten was also introduced during the Transition Period. In 1855 the first kindergarten in the United States had been organized by the wife of Carl Schurz, who had been a pupil of Froebel's. This school was located at Watertown, Wisconsin, among a group of cultured Germans who had been forced to leave their country because of their participation in the Revolution of 1848. Through the writings of Frau Schurz, and perhaps those of Henry Barnard, Elizabeth Palmer Peabody of Boston became interested, and opened in that city a school for small children in 1860. Convinced of her inadequate knowledge of the kindergarten she went to Hamburg in 1867 to study with Froebel's widow. Returning in 1868 she became the recognized apostle of the kindergarten in the United States, as Baroness von Bülow was in Europe. Several training schools for kindergarten teachers were organized soon after her return; and pupils of Froebel were imported

to conduct them. Private kindergartens were rapidly organized ; by 1880 four hundred had been opened in thirty different states. Kindergarten training schools had also been opened in ten important cities. Between 1880 and 1890 associations actively promoted the kindergarten cause in many cities, often demonstrating the value of the institution by conducting free kindergartens in the poor sections. The first public kindergarten organized as a part of a public school system was in St. Louis in 1873, under the leadership of William T. Harris, whose knowledge of educational philosophy enabled him to appreciate the significance not only of the kindergarten itself but also of the Froebelian principles underlying it. Susan E. Blow had charge of the St. Louis kindergarten. Before the end of the century ten leading cities followed the example of St. Louis and incorporated public kindergartens into their systems. This movement not only popularized the kindergarten itself, but prepared the way for a more intelligent appreciation of Froebel's principles, and for their application throughout the whole system.

Colonel Parker and the Quincy Movement. — By his contemporaries Colonel Francis W. Parker was regarded as one of the most progressive and influential leaders of the day. After a career in the Civil War, followed by some experience as a teacher, and three years' study in Berlin we find him as superintendent of the schools of Quincy, Massachusetts, and leader of

“the Quincy Movement.” Here a definite break was made with the old-fashioned drill methods of teaching. Special effort was put forth to make school studies interesting and pleasurable. Initiative and originality were encouraged in the teachers. Increased attention was given to geography and nature study; children were taken out of doors for much of this work. Sand tables in the schoolroom and sand piles in the school yard were used to help the children get notions of the shapes of hills, valleys, and plains. Local history and geography were taught without textbooks, so were spelling and language. Great enthusiasm was



COL. FRANCIS W. PARKER (1831-1902)

developed in the teachers, and the movement spread through New England. Institutes and summer schools sprang up, so anxious were teachers to secure insight and skill in the “new education.” Opposition resulted in the examination of the schools of Norfolk County, in which Quincy is located, with the result that the Quincy pupils were found to be in advance of the other schools in all the fundamental subjects except mental arithmetic. Thus the Quincy move-

ment was vindicated, and its example had a great deal to do with the spread of the new education.

Colonel Parker at Chicago. — In 1883 Colonel Parker was invited to the presidency of the Chicago (then called the Cook County) Normal School, where he labored for over fifteen years, putting into practice his theories, so like those of Froebel. Students flocked to his institution from almost every state in the West, attracted by the popularity of the new "fad," and by Parker's personality. Teachers went from his faculty to other institutions throughout the country. His virtue lay in trying to do, and in a measure succeeding in doing, what others for centuries had said should be done. He did not do the actual work of his subordinates, it is true; but he encouraged, he inspired, he supported, he protected them, and made their work possible. He praised work that was often indefensible, except that it displayed effort and originality on the part of the teacher. Many times he said: "Go ahead; and remember, if they get after you they must take me first." He was constantly in demand as a speaker before institutes and gatherings of teachers. He never spoke except to preach his crusade. His statements were often extreme, his positions sometimes inconsistent, but his personality was immensely attractive and his wit effective. On one occasion he retorted to a questioner in his audience: "Certainly I'd use spelling books if the board made the children bring them, of course I would; I'd put them in the

stove and heat the house with them." People felt a strong attraction to him, especially his own teachers. Like Froebel and Pestalozzi he loved little children. Unquestionably his influence played a very large part in the revolution in elementary school methods that has occurred since 1875. As Parker lived and worked till 1902 further mention will be made of him in a later chapter (see pp. 234, 267).

The National Education Association. — The improvement of the teaching profession was also promoted by voluntary organizations of teachers. The National Education Association was organized in 1858, and held its meetings and published its Proceedings annually. The contents of these volumes reveal an intelligent interest in a great variety of school problems; and the association was one of the most potent agencies for the discussion of education.

Pedagogical Literature. — There was also a healthy growth of professional literature. Numerous books on pedagogy appeared, though most of them were of the rule-of-thumb sort. Perhaps the most important of these was White's "School Management." Strange to say, however, the one book that was accepted as a classic throughout the period, and recommended to all young teachers, was Page's "Theory and Practice of Teaching," published in 1847.

Educational journalism was interfered with by the Civil War and recovery was somewhat slow; still some of the standard journals of the present were founded

during this period. Among such might be mentioned : *Journal of Education* (1875), *Popular Education* (1884), *Education* (1880), *School and Home Education* (1886), *Educational Review* (1891), *Pedagogical Seminary* (1891), and the *School Review* (1893).

The greatest contribution to pedagogical literature



HENRY BARNARD

during this period was Henry Barnard's *American Journal of Education*. Into this great work of more than 25,000 pages he put not only the chief energy of a long life, but his entire fortune of \$50,000. Even then the plates were rescued from the melting pot through the assistance of friends, including Dr. William T. Harris,

one of the few men then living who realized the value of such a work. The contribution it was capable of making to educational progress the reader may infer from Graves' summary of its contents :

"This great treasury of material includes every phase of the history of education from the earliest times down into the latter half of the nineteenth century. It furnishes accounts of all contemporaneous systems in Europe and

America, descriptions of institutions for the professional training of teachers, and essays upon courses of study for colleges and technical schools, the education of defectives and delinquents, physical education, school architecture, great educators, and a large variety of other themes. While it is always most reliable in its treatises upon foreign educational activity, of even greater value is its practical grasp of educational life in America from the beginning. It contains the greatest collection of interesting monographs upon the development of educational ideals and organization in the various states, and is the most complete description in literature of the educational life of a nation."

The Tendency toward Centralization. — As was pointed out in Chapter I (p. 19), the original New England school districts were autonomous; *i.e.* they were a law unto themselves. They were not only independent so far as control was concerned, but they were self-dependent for support. For a century, however, there has gradually been going on a movement toward centralization in school administration, that is, taking the control and support away from the local districts in part and giving it to the larger units, especially to the county and state. We have traced the beginnings of centralization in previous chapters (pp. 42, 129, 142). We shall now see how the same tendency continued during the Transition Period.

The Bureau of Education. — It was during the period, too, that the Federal Bureau of Education was established, — largely through the influence of Henry Barnard. Ever since he discovered as secretary of the

Connecticut State Board of Education how destitute the Federal Government was of all educational statistics and information, Barnard had never lost an opportunity to advocate the establishment of such a Bureau. Others, however, exerted the immediate influence that brought his plan to realization. In 1866 Emerson E. White of Ohio, at one time Superintendent of Schools in Cleveland and the author of several books for teachers, presented a plan before the National Association of State and City Superintendents. As a result a bill was presented to Congress, and was passed, largely through the influence of James A. Garfield, a Representative from Ohio and himself an educator by profession. The Bureau was thus created¹ and Barnard was made the first Commissioner. He at once inaugurated the policy which has made the Bureau ever since a clearing house of information on all sorts of educational subjects. The function which the Bureau, in some enlarged form (see p. 314), is destined to perform in the next generation will reveal the significance of its establishment sixty-two years ago.

The establishment of the Federal Bureau and of the land-grant colleges enabled the Federal Government to exert considerable influence over school matters, although it remained quite without authority to control education in the several states.

¹ A "Department of Education" was first established in 1867, but in the following year this was replaced by a Bureau within the Department of the Interior.

Development of State School Systems. — As stated before, all the northern states entered this period with state superintendents, and the southern states created such offices soon after the Civil War. The ten states having the largest permanent state funds for the support of public education had a total of about sixty millions of such funds in 1886. This was approximately the same amount that the same ten states were spending annually on public education. Since the income of the permanent funds was a little less than three million it follows that about fifty-seven million, or ninety-five per cent of the total current expenditure for education, was raised by local taxation. Compulsory attendance laws were passed in most of the northern states during this period, but were not well enforced. All this moved the districts still further away from the autonomy they had inherited from New England; the new state laws and the oversight of state and county superintendents made it harder for local communities to maintain as poor schools as local ignorance dictated; and the new state aid was some, if, indeed a very meager, relief from local poverty. But again it was a case of new foundations. We ourselves inherit the responsibility for superstructure.

Development of the City and County Units. — Another centralizing tendency was the rise of the city superintendency, one of the important movements of this period. Only twenty-four cities had appointed city superintendents prior to 1861, and they made the

superintendent a clerical official rather than a school administrator. "By 1876, however, 142 cities, out of 175 cities having 8000 inhabitants or over, had city superintendents of schools."¹ Thus the foundations were laid for the expert scientific control of education which will prove so necessary in the future.

Outside of the cities and larger towns the one-room district school continued to be almost a universal institution, and the description of it given in a previous chapter carries over into this period, except that control by the brawn of the pedagogue was giving place, as pioneer conditions receded, to control by public sentiment. Leading educators were beginning, however, to prophesy against the retention of the one-room school in such terms as the following: "Nothing would so freshen the neglected rural life in the North and control the terrible mania for herding in our new and crude cities as a superior elementary school in every district." Although the speech from which this sentence is taken was made before the National Education Association nearly fifty years ago, it sounds much like the speeches that we hear now, — so slowly has the rural school moved forward.

Educational Progress in the South. — The plight of the South was mentioned in the introductory paragraph (p. 151). Her taxable property had been reduced to less than half by the Civil War. Banks, investments, personal securities, currency, labor, and capital were

¹ Cubberley, "Public School Administration," p. 58.

all paralyzed. There was no public school system, but there was a high per cent of illiteracy, and a proportionate indifference to education. The negro problem seriously complicated the situation. Outside help was necessary. This was supplied through the Freedmen's Aid Society, by the Freedmen's Bureau of the Federal Government, and later by the Peabody and Slater Funds. The various religious denominations planted schools and colleges all over the South, some for the education of negroes, and some for the encouragement of white people whose advantages would otherwise have been very limited. Hampton Institute in Virginia was founded by the American Missionary Association in 1868, though it was presently placed on an independent footing. Tuskegee Institute was founded in 1881. An important feature of these schools was their combination of industrial with academic education after the Pestalozzi-Fellenburg model; though that feature was due more to the practical needs of the students and the common sense of the founders than to any conscious imitation of the Swiss reformers. But it must not be inferred that the South depended supinely upon outside aid; instead she set herself immediately and resolutely to the task; and by 1890 public school systems had been set up as going concerns throughout the South. Nevertheless illiteracy was still very high, and resources inadequate. The social system of the period before the war, and the war itself, may be said to have set the South back fully

a generation in her educational development. Even yet she has not recovered from the handicap ; and that fact constitutes one of the chief reasons for generous Federal appropriations for education.

The Higher Education of Women. — The battle for the education of women had been vigorously begun in the previous period ; by 1890 the question was virtually settled. There never was any dispute about the equal status of girls in the public high schools ; coeducation was established in the colleges and universities of the west, although occasionally an easterner debated its propriety ; and adequate facilities, either through annexes or women's colleges, had been provided in the east. Vassar was founded in 1861, Wellesley and Smith in 1875, Bryn Mawr and Goucher in 1885. Even professional schools with some exceptions had, by 1890, opened their doors to women. The Civil War and the great industrial development immediately following, by creating a heavy demand for young men in other lines of work, drew increasing numbers of women into the schoolroom. And all this was a necessary preparation for the new status into which women are now entering.

Extension Work. — The psychologists tell us that there is no reason why the education of adults should not continue through life ; and we are beginning to discern that in complex modern society there is good sociological reason why it should continue, especially in cases where early opportunities have been meager.

Provision for this need is destined to be one of the important educational advances of the next generation. The germs of it are to be found during the Transition Period in the Chautauqua Movement. This movement was inaugurated by Bishop John H. Vincent. The first Assembly was held at Chautauqua Lake, in western New York, in 1874. From the beginning the movement had the coöperation of leading educators, clergymen, and publicists including William Cullen Bryant, Edward Everett Hale, Lyman Abbott, Henry C. Warren, and William R. Harper. In 1878 the Chautauqua Home Reading Circle was founded, which offered an organized course of reading covering four years, and designed to give to mature people "the college outlook." In a very few years 60,000 persons were pursuing these courses. Later developments of the Chautauqua movement will be considered in a subsequent chapter.

Foreign Education. — Regarding European schools during this period: Up to 1890 the German system remained practically unchanged in general organization, except that continuation schools became much more numerous. After the Franco-Prussian War, Germany began using her schools to inculcate imperial militarism. In France elementary education was made not only free (1881) but compulsory (1882) for all children between the ages of six and thirteen. Secularization of schools was also begun during the eighties. Similar developments occurred in Sweden, Denmark, and Italy.

Japan established a system of public elementary schools during this period, at which attendance soon became practically universal. The Act of 1870 in England was really epoch making; it established a system of free, tax-supported schools at first called "board schools," because they were controlled by the Board of Education, but now known as Council schools. These were to supplement the old-fashioned parochial ("voluntary") schools wherever the latter were inadequate to the needs of the people. Prior to 1870 England had depended entirely upon "voluntary" schools for elementary education. The law of 1870 created a modern system of public schools. Compulsory attendance up to the age of eleven was decreed in 1880; and tuition was abolished in the "voluntary" schools in 1891, thus making free elementary schooling accessible to all. Nowhere in Europe, however, was there any movement for free secondary education corresponding to the high-school development in America. While primary education was now free to the masses, secondary and higher education, especially in Germany, was still reserved for the fortunate classes.

Summary. — The period between 1861 and 1890 we have called the Transition Period, for while other periods have had similar characteristics, this seems preëminently to deserve the name. By 1890 secondary education had been put on a new foundation; it was evident that the academies had served their day, and

that the free, public high school was destined to be the secondary school of the future. This was an innovation; moreover it was a prophecy of universal secondary education. By 1890 elementary education also was on a new footing; the curriculum had been enriched, better methods of instruction and discipline had been introduced, and grading had thoroughly transformed the organization. Higher education had achieved a new curriculum; the back of tradition had been broken, and the doors opened to natural science, economics, and modern social problems. Agriculture and engineering had each achieved a standing as a scientific profession, and the older professions placed on a scientific basis. Normal schools, teachers' colleges, pedagogical literature, and educational reformers had demonstrated the value of teacher training, — had virtually promised the next generation a body of professionalized educators. The theory of district autonomy had been definitely abandoned and the movement toward larger units of taxation and control had been well started. All these things were beginnings, it is true; but most significant beginnings. They presaged an educational system as different from that of a century ago as the steam locomotive is different from the ox-cart. Upon these foundations we must build the schools of to-morrow — a system of free, liberal, diversified education capable of preparing every citizen for the duties and advantages of a complex democratic, but problematical, civilization.

CHAPTER VIII

THE RECENT PERIOD, 1890-1920

A. Educational Reorganization

The Social Situation. — In the last chapter it was pointed out how our fathers, during the generation just following the Civil War, tried blindly to manage the forces that were destined to produce a new civilization; blindly, because they neither foresaw the coming change nor understood the forces that they were trying to direct. Nevertheless they laid foundations, especially in education, almost as if guided by Providence. Now it seems that the chief characteristic of the recent period is that men's eyes have been gradually opened so that they do foresee. The course of events since 1890 has forced our eyes open.

Economic Developments. — The great billion dollar "Steel Trust" was organized about 1899, and that was only the greatest of a great number of great corporations organized at about that time and since. The "Anti-trust" act had no more effect in checking them than King Canute's command had in checking the oncoming tide. And so men gradually came to see that great industrial combinations were inevitable; and

then to see that they are absolutely necessary to what we may call "machinofacture" industry. Meantime labor as well as capital was organizing on a large scale, and gradually we have come to see that such an organization also is necessary. As long ago as 1890 a few men foresaw (now there are only a few who fail to see) that these two giants are about to remake their world — and ours!

In the period just after the Civil War the public seemed to have unlimited confidence in the government. But dating from about 1903 there began what may be called an era of exposure. About that time a great deal began to be said about corruption in local and state government. Gradually the blame shifted from the politicians in front of the curtain to the interested persons and groups behind the scenes. Then the term "invisible government" was invented to suggest that the visible government was being controlled by forces that were often opposed to the interest of the people as a whole, whose collective will a democratic government is supposed to reflect. No patriotic American can doubt the issue. "The man with the hoe has broken the silence of the centuries"; and no great imagination is necessary to discern that a new chapter is opening in the history, not only of our country but of the entire human race.

Once more: during the "era of exposure" a good deal was said about "high finance," "the cheat of overcapitalization," and the like. Gradually we had to

admit that something was wrong with the distribution of wealth in this country ; and not only wrong, but getting worse. A few were piling up vast fortunes out of all proportion to their services, while millions were profiting little or none by modern inventions. At first a few, then more, finally nearly all, came to realize that there were causes for this in the very organization of modern industry, and that this must somehow be changed, otherwise America will cease to mean opportunity, as Emerson said it meant, and democracy will be spoiled by castes in society.

Other problems have loomed up in the last thirty years: the rural problem, the city problem, the immigration problem, and many others. That these are new problems is evident from the attention they have received. Sociology was almost unknown in 1890; political economy was not much patronized at the colleges and universities. Since then these two subjects have spread out like a fan; a great many technical books have appeared on economic and sociological subjects, and social problems have furnished themes for innumerable novels, dramas, and poems. Literature is not essentially descriptive as it was in the previous period; it focuses on the social problem. It has become conceptual. All this interest is evidence of an awakening; it shows that we are acutely conscious of new social conditions; it is a sort of prophecy that a new order of things is not far in the future.

The Spiritual Side. — But the period has been one of awakening to the realization of a new age in the less tangible aspects of life also. How much is left of the old religious beliefs? This is now a timely question. Whether the new is looked forward to with assurance or with misgiving depends upon the vitality of the observer's faith in God and man; but certain it is at any rate that we already have a new theology. In morals also everybody has become conscious of changes. We realize now that we have let the desire and opportunity to prosper take too much of our attention. All America is coming to see that the mere possession of material things does not satisfy. We discover, also, that we have been too selfish. The Great War has taught us that there is in human nature a strong impulse to serve some great, good cause; and we are beginning to realize that to satisfy that impulse is essential to complete and permanent happiness. And so we see that our deepest need of all is a new philosophy of life. Few felt that, either, in 1890; nearly everybody feels it now, however vaguely. Thus we anticipate the dawn of a new spiritual day.

International Relations. — In international relations, too, a new era has dawned. The Spanish American War first widened our horizon and forced upon us responsibilities in the eastern hemisphere. The Boxer Rebellion in China called for our coöperation with other nations. But it has been the Great War that has most severely shaken our older traditions of isola-

STATISTICS SHOWING GROWTH OF SCHOOLS

	1870	1880	1890	1900	1910	1915
Total population	38,000,000	50,000,000	62,000,000	75,000,000	92,000,000	100,000,000
Persons 5-18	12,000,000	15,000,000	18,000,000	21,000,000	24,000,000	26,000,000
Pupils enrolled	6,871,000	9,867,000	12,722,000	15,503,000	17,813,000	19,704,000
Percentage of 5-18 enrolled	57	65	68	72	73	74
Average length of term (days)	132	130	130	134	144	157
Average days attended by pupils enrolled	78	81	86	99	105	113
Teachers	200,515	286,593	363,922	423,062	460,269	604,301
Percentage, male	38	42	34	30	21	19
Average wages, men . .				\$46	\$69	\$82
Average wages, women .				\$39	\$53	\$65
Value school property . .	\$130,000,000	\$209,000,000	\$342,000,000	\$550,000,000	\$1,091,000,000	\$1,567,000,000
Total expended	\$63,000,000	\$78,000,000	\$140,000,000	\$214,000,000	\$426,000,000	\$641,000,000
Per pupil year expenditure	\$9.17	\$7.90	\$11.00	\$13.80	\$23.35	\$32.53
High schools			4,485	8,210	12,075	14,121
High school pupils . . .			310,000	650,000	1,100,000	1,600,000

tion. The Monroe Doctrine has lost its significance in so far as it kept us out of European affairs. Washington's advice about entangling alliances no longer applies; for obviously modern communication and commerce are themselves entangling alliances. And our very disinterestedness is forcing upon us responsibilities and opportunities for world service, now that the war is over, that we cannot evade. It is our "manifest destiny" to take a new part in international affairs, and a part that will be very significant both to us and to all the world.

A New Education for a New Age. — Such is the new age into which events have been bringing us, and which those events themselves have made us anticipate keenly. The educational awakening that has occurred during the same period has been commensurate, and truly marvelous. There have been times when peoples have "unconsciously realized" their need of a new education to meet the demands of a new civilization. The development of the seventies and eighties was largely of that unconscious character; but it has been far less unconscious in the period now about to be traced; in fact we have reached the time when it is quite conscious. This is shown by the new philosophy of education which the awakening age has given rise to. Lester F. Ward (cf. p. 166), with prophetic voice, set forth the democratic ideal of a liberal education for all. To meet the needs of democracy in a changing age like this, John Dewey recommends an educational

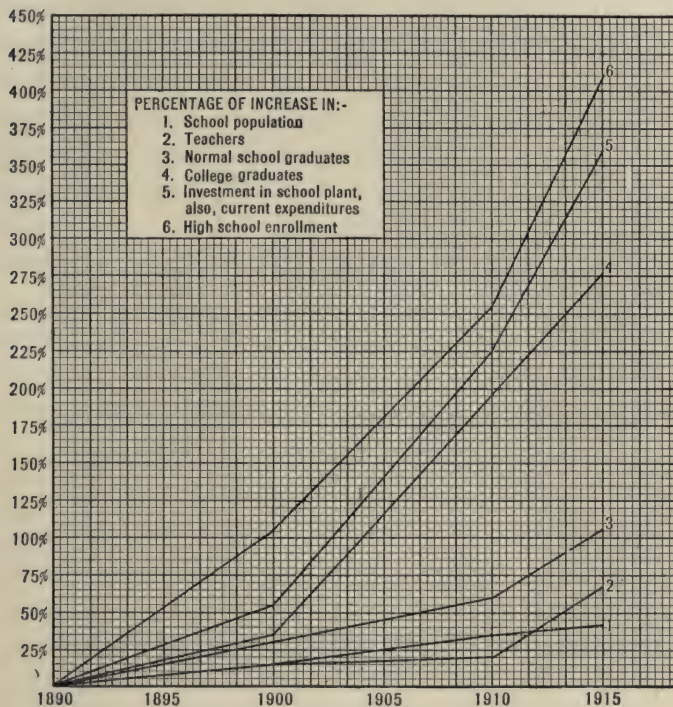
method that will produce the problem-solving attitude of mind, and a liberal distribution of knowledge and culture to all. Thus educational theory frankly demands a new education for a new civilization. It is well for all teachers to realize that a new era is dawning in the evolution of democracy; that a new education is absolutely necessary to the success of that new democracy; and that for more than thirty years this new education has been evolving. Its scope and extent will be discussed in this and the next two chapters.

Increase in the Quantity of Schooling. — The first thing to be noted in the period of twenty-five or thirty years just past is the unprecedented expansion in all phases of American education. This is most apparent in the material growth of schools as indicated by the table on page 190, compiled from the Annual Reports of the United States Commissioner of Education.

ADDITIONAL STATISTICS OF GROWTH

SOUTH	NUMBER SCHOOL PUPILS		EXPENSES	PER CAPITA
	White	Black		
1876-77	1,827,139	571,506	\$ 11,231,073	\$ 4.68
1896-97	3,943,801	1,449,325	31,149,724	5.78
1916-17	6,244,461	2,019,072	123,311,613	14.92
U. S. A.				
1870	7,561,582		\$ 69,107,612	\$ 9.14
1900	15,503,110		214,964,618	13.87
1916	20,351,687		640,717,053	31.48

It will be observed that in every significant item educational statistics have outrun population statistics. The percentage of enrollment of school population has increased only 6%, but the school year has lengthened



twenty-seven days (*i.e.* 20%); besides, pupils attend a slightly larger percentage of the longer year than they did of the shorter year. The average number of days attended by each child of school age increased from 58 in 1890 to 83 in 1915, an increase of more than

40%. In other words, the average candidate for citizenship is getting at least two fifths more schooling now than thirty years ago.

Improvement of Quality. — Judging from the figures the quality of schooling has improved even more than the quantity has increased. The number of teachers has almost doubled since 1890, while the number of pupils has increased less than 50%; which means that each pupil gets more teacher-time than formerly. Professional preparation for teaching has improved. The proportion of women teachers is on the increase. This is fundamentally due to the fact that our country is relatively new, and its resources, therefore, relatively undeveloped, so that there are attractive opportunities for men in the various industries and professions. Whether we have an undue proportion of women in the profession is debatable. Perhaps the chief argument in favor of more men is not the fact that they are men, but the fact that men are, if adequately paid, more likely to remain in the profession permanently. Salaries have been increasing, it is true, and especially since the Great War; nevertheless the increase has not more than met the increased cost of living, and the lack of adequate salaries still remains as the chief handicap to the efficiency of American schools.

Investment and Equipment. — In other types of school maintenance there has been an almost startling increase of investment. The annual per pupil-year expenditure has more than doubled (cf. p. 190). In 1890

we spent \$11 a year on each pupil, on the average; in 1915 we were spending \$32.53, or nearly two and a half times as much. The most astonishing development of all, however, is the investment in material equipment. This has been multiplied by five. This change is as significant as it is outstanding. It represents an immense development on the material side; but more than that it reveals a complete revolution in the aims and contents of education. The old type of school building has passed away because the old type of schooling has passed away. The old building had classrooms, recitation benches, pupils' desks, and blackboards. It was equipped for the old-fashioned, formal instruction, in the old-fashioned, narrow curriculum. The modern building is provided with laboratories of various sorts, shops, kitchens, and dining room; commercial departments, art and music equipment, gymnasiums, modern heating and ventilating systems, sanitary toilets, libraries, picture projectors, auditoriums, playgrounds, and experimental farms. It implies not only a vastly wider range of subjects, but a freer method of instruction, and a closer relationship between school and community life.

High School Development. — But the most important aspect of all this is that the modern plant has been built to equip the modern high school, which is the most important development of American education because it signifies that a liberal instead of a meager education is to be furnished to everybody. It will be

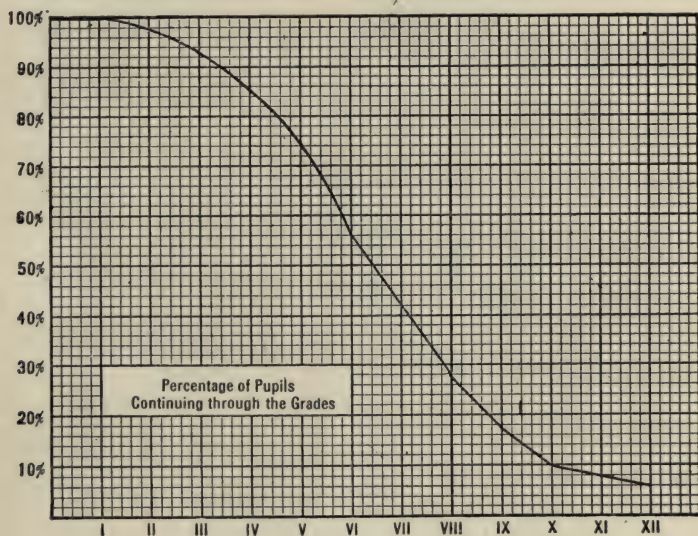
noted that the number of high schools more than tripled between 1890 and 1915, and that the number of students in attendance at secondary schools became more than five times as great. Practically every little village in America now has its high school, and the consolidation movement has built many of them in the open country. Agricultural high schools are being rapidly developed in the farming regions, and industrial high schools in the towns and cities. Without realizing it, we have already made long strides toward universal secondary education, which is just now beginning to be openly recognized as an ideal, and which must be achieved almost immediately if a sound and vital democracy is to be realized in America. The necessity for this arises out of the social, economic, and political changes outlined in the first part of this chapter.

However, the high school situation is as striking in its present deficiencies as in its achievements. Notwithstanding the growth of high school enrollment, only a few, relatively, get a high school education.

“At present only about one third of the pupils who enter the first year of the elementary school reach the four-year high school, and only about one in nine is graduated. Of those who enter the seventh school year, only one half to two thirds reach the first year of the four-year high school. Of those who enter the four-year high school, about one third leave before the beginning of the second year, about one half are gone before the beginning of the third year, and fewer than one third are graduated.”¹

¹ Bureau of Education, Bul. No. 35, 1918.

These withdrawals are graphically presented in the accompanying chart. But while there were 1,600,000 high school pupils in 1915 there were only 226,000 graduates. It is estimated that if all our adolescents received a complete high school education there would be about 2,000,000 graduates annually. In other



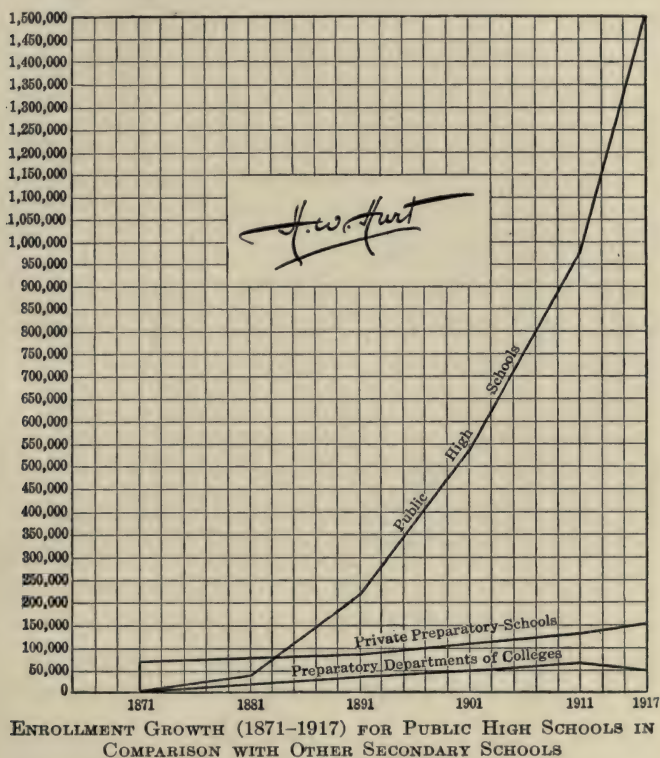
words, the graduation from high school is only about 11% what it ought to be. The growth of the last forty years indicates, however, that this is not so much a defect as an incomplete development. Unsatisfactory as it may and should appear, it is well to remember that it is even now an achievement unsurpassed in the history of education.

The present status of private and parochial schools

GROWTH OF COLLEGES AND UNIVERSITIES

	1890	1895	1900	1905	1910	1915	PER CENT INCREASE
Students, male	45,000	62,000	72,000	92,000	120,000	152,000	405
Students, female	21,000	28,000	38,000	46,000	64,000	85,000	359
Students, total	66,000	90,000	110,000	138,000	184,000	237,000	277
Degrees confer'd (not hon'ry)	9,000	11,000	13,000	18,000	27,000	34,000	972
Receipts (excl. endowment)	11 mil's	18 mil's	23 mil's	42 mil's	95 mil's	107 mil's	531
Endowment	74 mil's	110 mil's	177 mil's	237 mil's	299 mil's	393 mil's	622
Grounds, buildings., etc.	73 mil's	144 mil's	214 mil's	279 mil's	367 mil's	454 mil's	

may be inferred from the fact that less than 9% of the school children of the United States now attend private and parochial schools.



Higher Education. — While this book is concerned principally with elementary and secondary schools still some reference to the phenomenal development of higher education cannot be omitted. The accompanying table shows the growth of colleges, universities,

and technical schools. The raising of standards can not be shown in the table; but it is obvious, for instance, that an increase in graduates from nine to thirty-five thousand does not tell the whole story; to complete the record, standards of graduation have to be considered also. The increase of income is the most remarkable: nearly ten times as much in 1915 as in 1890. These figures are vitalized by some typical facts that middle-aged people remember. The University of Chicago opened its doors in 1891, Clark University was founded in 1889, Columbia was re-organized as a university in 1890; similar expansion occurred in other institutions at about the same time; thirty years ago the great state universities of the Middle West were just emerging from the small-college stage of their development; and farmer boys had as yet heard very little about the agricultural colleges. The German universities were still the goal of the ambitious student's dream. To-day the enrollment at a dozen of the state universities — not to mention another dozen of privately endowed institutions of equal importance — ranges from six hundred to six thousand, and their catalogues show the following departments of sufficient size to be called schools or colleges: agriculture, architecture, business administration, dentistry, education, engineering, forestry, fine arts, history and economics, household arts, journalism, law, liberal arts, medicine, mining, music, pharmacy, science, and veterinary science.

College Entrance.—In connection with the growth of secondary and higher education it will be interesting to note the gradual democratization of college entrance requirements. During the entire period under discussion the question has been a live one. At the beginning of the period the old custom still prevailed. According to this tradition the colleges practically dictated to the preparatory schools what their curriculums should be. In the eastern states entrance had always been by examination; and in some of the eastern institutions this custom still prevails. In the west the practice was begun by the University of Michigan, and adopted by nearly all other state universities, of accrediting high schools after inspection. The graduates of accredited high schools are admitted without examination, provided that they show credit for certain prescribed subjects. In this way the college still dictates to the high school. But the growth of the high schools, and the gradual recognition of their task of preparing young people for life who do not intend going to college, is rapidly turning the tide. In the report (1918) of the Commission on the Reorganization of Secondary Education¹ we read the following: "Pupils who, during the secondary period, devote a considerable time to courses having a vocational content should be permitted to pursue whatever form of higher education, either liberal or vocational, they are able to undertake with profit to themselves and to society."

¹ Bulletin No. 37, 1918, U. S. Bureau of Education, p. 20.

This theory is beginning to be accepted in practice, and entrance requirements are being liberalized very rapidly.

Internal Changes : Adapting the School to the Needs of the Child. — So much for the external growth of schools. Internal changes have been equally important. The changes in curriculum have been so extensive and important that the subject, although it comes logically here, will be postponed and a whole chapter devoted to it. Only less important than the curriculum, however, is school organization. As Rousseau discerned, democracy must fit the school to the needs of the child. Several important changes have been made in the past twenty-five years all of which tend to make the schools more flexible.

Making the Grading System Flexible. — About the beginning of the period under discussion the grading of schools had been pretty well completed, except in rural schools, where the principle has since been applied. But no sooner was that process complete than its rigidity began to be felt, and so various sporadic attempts have been made to increase the flexibility of the grading system, especially during the last ten years. John Kennedy, Superintendent of Schools at Batavia, New York, developed what was known as the Batavia system some twenty years ago. His aim was to provide more individual instruction. The plan has not been widely adopted. In some schools a modification of the Lancasterian method was used: classes, es-

pecially reading classes, were divided up into small groups under the leadership of one member of the group. This plan involves the characteristic Lancasterian difficulty, and has not met with favor. In large school systems the "Cambridge plan" has been widely used. By this plan the children go through the school grades in two parallel streams, one by seventeen stages, and the other by twenty-three. A child may at any time be transferred from one stream to the other without any great promotion or demotion. By this scheme it is rather easy to adapt the pupil's speed to his ability. Obviously, however, this plan is not adapted to use in small systems. In recent years it had become customary in large schools to organize ungraded classes or special schools for backward, peculiar, or defective children. Modern psychology is increasingly emphasizing individual differences and devising scientific methods for their accurate measurement, and it is increasingly recognized that regard must be paid to such differences in the internal organization of elementary and secondary schools. If compulsory attendance is to be enforced for the good of society, it follows that, for the good of society, subnormal children must be given the special attention that will enable them to make the most of whatever measure of ability they may possess.

The Cincinnati Plan. — In connection with the extension of secondary education one of the difficulties encountered is the necessity, on the part of many

adolescent boys and girls, for self-support. Night schools are a frequent solution of this problem. They are now very common in the larger cities, and even in the open country some use has been made of them. Another attempt to solve this problem is the Cincinnati plan,¹ so called because it originated in the department of engineering of the University of Cincinnati. The idea, however, was imported from England. By this plan two students are paired off against each other, each working alternate weeks in school and in a shop. In this way the shop is furnished a steady employee, while the school work is repeated in units covering a week each. The arrangement provides also for a closer coördination of theory and practice than would otherwise be possible. This plan had been tried in various high schools, notably at Fitchburg, Massachusetts, York, Pennsylvania, and New York City. Coöperation has been carried on with mail-order houses, department stores, machine shops, railroads, automobile factories, printing offices, electric light and power companies, and other branches of industry.

The Gary System. — The reaction against rigid grading is one aspect of the whole recent tendency to render the school more flexible, to adapt it better to individual needs, and to make its activities represent a wider variety of cultural experiences. There have been numerous attempts to harmonize practice with these ideals. One of the most conspicuous of these

¹ See U. S. Bureau of Education, Bulletin No. 37, 1916.

experiments is the one that has been in progress at Gary, Indiana, for more than a decade, under the leadership of Superintendent William A. Wirt. The two outstanding features of the Gary idea are:¹ "first, the enrichment and diversification of the curriculum; and, second, the administrative device that, for want of a better name, will be tentatively termed the duplicate school organization." Under the first are included: "community activities, facilities for recreation, shopwork, and household arts." This provides for two distinct types of subject matter: "first, definite subjects, that have in the last resort to be learned in such wise that the pupil may attain and demonstrate a reasonable degree of mastery; next, æsthetic or other activities, giving wholesome pleasure at the time, and tending to establish higher levels of need and taste."

The second of Gary's distinctive features is graphically presented by these two diagrams, taken from the Gary report. This same report² sums up the success and shortcomings of the Gary system somewhat as follows. On the credit side is, first, the fact that Gary has actually made a bold attempt to put into practice modern educational theories both as to content and method; and, second, Gary's contribution to school organization. On the debit side is the fact that the

¹ See "The Gary Public Schools: Organization and Administration," by Strayer and Bachman, Chapter IX.

² "The Gary Schools, A General Account," Flexner and Bachman, Chapter XVI.

Gary schools make on the whole a rather poor showing in the fundamental subjects as revealed by the standard tests, and the further fact that "conscientious insistence upon excellent performance is only sporadically

FIG. I

Forty rooms for forty classes of forty children each, *i.e.* facilities for the academic instruction of 1600 children. A school yard and an extra room or two, little used, for general activities, are also usually found.

FIG. II

A

Twenty classrooms for academic instruction of twenty classes of forty children each (800 children) in the morning hours, and an equal number in the afternoon (1600 in all daily).

B

Special facilities taking care of 800 children in the morning hours, and an equal number in the afternoon hours (1600 in all daily).

Auditorium
Shops
Laboratories
Playgrounds, gardens, gymnasium, and library

in evidence." The report, however, takes pains to leave the impression that these defects are due, not to the Gary idea, but to inefficient administration and supervision. The inference is that with efficient administration and supervision, discipline and instruction in the fundamental subjects might be conducted in such a way as to avoid all bad results, while securing the "modern" ends at which the system aims.

The Junior High School. — Another important item of internal reorganization that has developed within the past decade is the "junior high school." Just prior to 1890 President Eliot of Harvard began to urge an earlier attack in our public schools upon the secondary subjects. The problem was considered by the Committee of Ten (1892) and the Committee of Fifteen (1893). In 1898 President Butler of Columbia University pointed out that the traditional school organization was ill adapted to the nature of the child-mind in early adolescence. The period of discussion continued till about 1905, when the principles underlying the present Junior High School may be said to have emerged with considerable definiteness. This new institution is intermediate between the elementary and the secondary school, and usually includes grades seven, eight, and nine. It aims to economize time by completing the fundamentals earlier, instead of expanding them uselessly during the seventh and eighth grades, and also by beginning secondary subjects earlier. By more flexible organization, particularly by

the use of the elective plan, and by the introduction of more interesting subject matter, it aims also to adapt school life to the peculiar needs of early adolescence. This last is the vital reason for the new plan. It is frequently referred to as the six-three-three plan. In 1909 the N. E. A. Committee on Six-Year Course of study reported that twenty-two cities had organized such a course, and in 1914 it was asserted that the old eight-four plan was "rapidly growing obsolete." The older "eight-four" organization, however, still remains in the majority of schools.

The Tendency Away from Localism. — The arrangements by which a government supports and controls its schools are quite as significant as the number of buildings or the course of study. A narrow localism in the support of education is a curse to a great young democracy like ours. It permits too many localities to have poor schools; and besides it fails to provide for national unity. We have made a very fortunate development in overcoming this localism since 1890.

(a) **Consolidation.** There are those who claim that the backwardness of rural education is our most critical social problem. Farm life has been very greatly modified by the industrial and social changes of the past fifty years. The oxcart, the saddle, and even the spring wagon have gone, so have the double-shovel corn plow, the cradle, and even the reaper. But the old one-room school remains, almost exactly as it was fifty years ago, except that the big boys and girls

are ashamed to attend it. It is a disgrace to any progressive farm community. It would appear that the consolidated rural school is the key to its solution, because only thereby can secondary education be made easily available to country boys and girls. Consolidation means the abandonment of several one-room rural schools in adjacent districts, and the substitution in



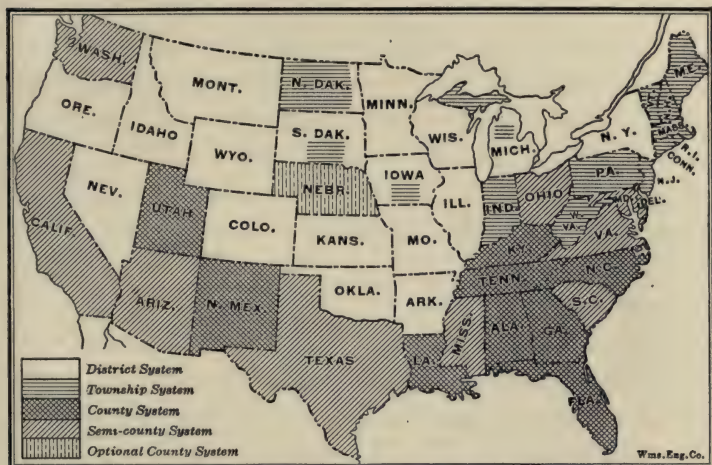
"BACK TO THE FARM." A home talent play very popular in consolidated schools.

their stead of one large graded school. This involves transportation of pupils, and provides for a high school. This movement had made a beginning in Massachusetts as early as 1890. Several other states, — Maine, Rhode Island, New Hampshire, Vermont, Pennsylvania, Ohio, and Indiana, — followed during the next decade; that is, permissive laws were passed, and a few schools were consolidated. Since then the movement has spread quite generally, though the vast

majority of the old one-room schools remain to this day. At the present writing, there are no statistics available as to the number of consolidated schools now in existence. This is partly due to the fact that the definition of a consolidated school has not been standardized. But those in a position to be best informed estimate that there are now (1920) about 11,000 such schools, and that the number is about three times as great as it was six years ago. The county-unit plan described in the following paragraph would greatly facilitate consolidation because (if accompanied by adequate state laws) it would supply an authority that could redistrict the county and put the consolidated schools where they are most needed.

(b) **The County Unit.** At the beginning of this period (1890) the districts were still quite independent. There is now a decided movement toward the county unit. This means a county board of education elected by the people, whose chief function it is to select a county superintendent. This officer administers all the schools of the county in much the same way that all the schools of a city are now administered by a single city superintendent. The object is to substitute a larger for a smaller unit of taxation, thus equalizing school opportunities in the county, and also to substitute administration by a professional expert for administration by the local boards of laymen, which Cubberley characterizes as "expensive, inefficient, inconsistent, short-sighted, unprogressive, and penu-

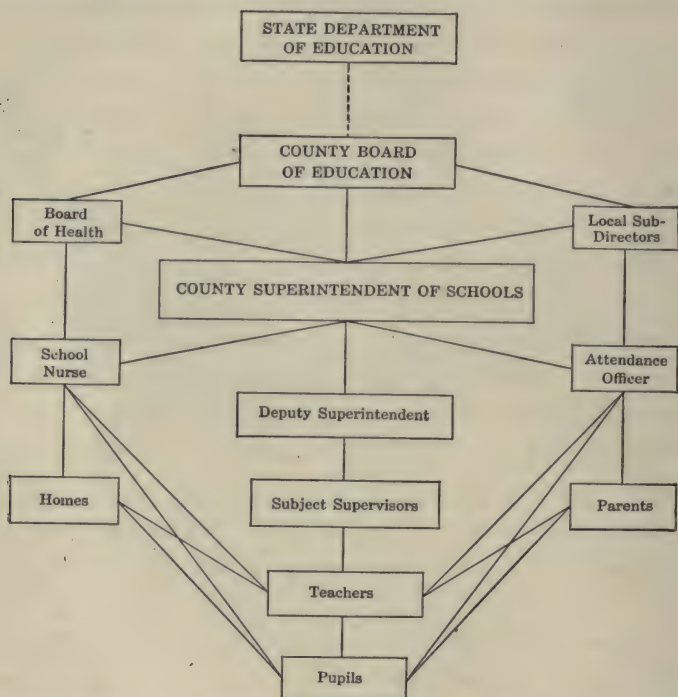
rious." The accompanying map shows where the various systems of school administration are in use; while the chart indicates the type of county organization now advocated by expert educational administrators.



DIFFERENT UNITS OF SCHOOL ORGANIZATION. This map shows graphically the different units of school organization in use throughout the country. The county unit, in one form or another, is making steady headway. (Bulletin No. 4, 1919.)

(c) **State.** In the state organization for the support and control of education the tendency of recent years has been, first, to change the State Board of Education from the old, *ex-officio* board to a small state board composed of representative citizens, and to substitute for the popularly elected state superintendent an expert educational administrator selected and appointed by this new type of board. New York passed such a law in 1904, Massachusetts in 1909, New Jersey,

Pennsylvania, Arkansas, and Oklahoma in 1911, Idaho in 1913. Seven states now select their state superintendents in this way; in ten states these officers are



PROPOSED PLAN FOR ORGANIZATION OF COUNTY SYSTEM OF EDUCATION.

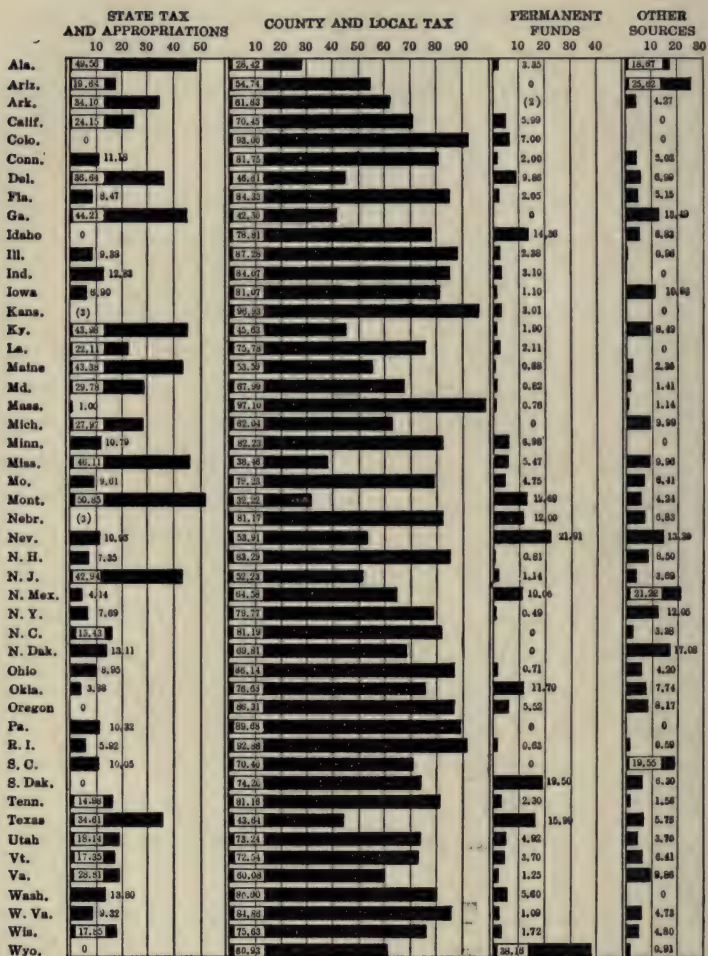
This is a graphic representation of a county plan of organization contained in a report of the state-wide educational survey recently completed by the United States Bureau of Education for the Legislature of South Dakota. (Bulletin No. 4, 1919.)

appointed by the governor; while in thirty-one states they are still elected by popular vote. The object of this newer arrangement is to take the administration

of educational affairs out of politics and give the schools the benefit of expert professional direction. This is the culmination to date of the movement begun with the creation of the first state superintendency in New York in 1812.

The second tendency in state administration is to increase state aid to local schools. The object of this is to equalize educational opportunities throughout the state. A democracy must, as an act of self-preservation, furnish equal school opportunities to all the children of all the people. This we are not doing at present. A study of the accompanying maps and charts will show how much less opportunity some states are furnishing their children than other states are. It would be interesting for the reader to construct similar maps and charts for the different counties of his own state; they would doubtless reveal similar differences. The way to correct the inequalities among the states is by federal aid; the way to correct the inequalities of the counties is by state aid. It will be readily seen by a glance at the chart on page 214 that we still depend too largely on local taxes. Fortunately, the tendency is to increase state appropriations.

(d) **Federal.** The Bureau of Education, organized in 1867, gradually increased the scope of its work. Specialists in various types of education — rural, vocational, higher, and the like, — have been added from time to time, and the appropriations for its maintenance,



Wms. Eng. Co., N. Y.

PER CENT OF SCHOOL FUND DERIVED FROM EACH SOURCE, 1915-1916.
(U. S. Bureau of Education Report, 1917, p. 79.)

This chart shows graphically the several sources of school revenue in the U. S. Unfortunately it is impossible, with the data at hand, to separate county and other local taxes. (U. S. Bureau of Education, Bulletin No. 4, 1919.)

while still far from adequate, have been increased. The Smith-Lever Act of 1914, by which the Federal Government appropriated large sums for extending the function of the Agricultural Colleges, and the Smith-Hughes Act of 1917, by which federal grants were made to the states for vocational education, both recognized the nation's responsibility for insuring educational progress. By the provisions of these acts, the appropriations are distributed according to conditions prescribed in the law and administered by federal officials. The Smith-Towner Bill now pending proposes large appropriations for general education and the creation of a Department of Education, with a Secretary in the President's Cabinet. This sharing of educational responsibilities by the government is in harmony with a tendency that has been accumulating for a century; the aim is clearly to equalize educational opportunities throughout the country. This is necessary to produce the like-mindedness of all its people upon which a nation depends. Besides, some of our problems, such as health conservation, illiteracy, Americanization, vocational education, rural backwardness, the shortage of teachers, are national problems, because it would be a menace to the nation as a whole if we permitted poor or backward states to leave them unsolved.

Educational Extension. — If universal liberal education is to be realized as the aim of democracy it is not enough to provide a system of schools for children.

Educational opportunities must be accessible all through life, both for those who may have missed satisfactory opportunities for schooling in their youth, and also for ambitious persons who wish to continue higher studies. One of the important developments of the past generation has been the growth of out-of-school schooling.

By Correspondence. — The correspondence school idea was imported from England. President William R. Harper, who had previously conducted correspondence work in Hebrew while professor in the Baptist Union and Yale Theological seminaries, developed the plan more extensively in 1892 at the University of Chicago, of which he was the first president. Sixteen years later the institution had 2386 correspondence students. Other universities imitated the example of the University of Chicago. The International Correspondence School of Scranton, Pennsylvania, began about 1890. This well-known institution and others of its type have since conducted an enormous business, affording educational opportunities to millions who otherwise would have had none. Closely allied to correspondence instruction is the extension work of many universities, whereby the offerings of the university, in part at least, are brought to the people of its territory in the form of bulletins, lectures, and extension classes. Stereopticons and moving-picture projectors have greatly increased the possibilities of this service.

“Moonlight Schools.” — There is perhaps no better connection in which to mention that unique and ro-

mantic type of extension work, the famous moonlight schools of Kentucky. Cora Wilson Stewart, superintendent of Rowan County, discerned the tragedy of the illiterate, and enlisted the teachers of her county in the crusade of conducting free evening schools for illiterates. People in large numbers attended and of all ages, even up to eighty-seven. This was in 1911. The crusade spread to other counties, and finally became state wide, with the aim of wiping out illiteracy in Kentucky before the census of 1920.

The Y. M. C. A.—The educational work of the Y. M. C. A. has been strictly a development of the past twenty-five years. Prior to 1890 the little that had been done was looked upon as a very subordinate feature of the Association's work. In 1893 the International Committee established a new educational department. Since 1900 the work has rapidly expanded. Local conditions and personal needs are carefully studied, and the system is fitted to the person, rather than the person to the system, as is too often the case with the public schools. The great need for vocational education has proved to be the chief opportunity of the Association, although the scope of the work is not limited to vocational classes, including as it does reading rooms, libraries, general lectures, practical talks, educational tours, clubs for research, study, discussion, reading, and social service, class lectures for mature men, regular classes in commercial, industrial, and academic subjects, tutoring, Americanization work,

as well as apprentice, continuation, and other vocational schools. Most of this great work has been done in evening schools, though some day service has been employed ; and the Association maintains a regular college at Chicago. The present extension of Y. M. C. A. work into villages and country places promises to extend these educational services there. The Young Women's Christian Association carries on a similar work.

DEVELOPMENT OF Y. M. C. A. EDUCATIONAL WORK

	1893	1897	1901	1909	1914	1916
Total number students	12,000	25,200	26,906	46,848	84,577	82,385
Total expense	\$72,000	\$118,000	\$193,000	\$570,000	\$1,086,000	\$1,143,000

Chautauquas, Libraries, etc. — It is impossible even to enumerate all the out-of-school agencies of education that have developed in recent years. The Chautauqua movement (see p. 183) has taken a new turn. It now consists of summer lectures and entertainment courses, under local auspices, conducted in practically all cities and in very many villages. These courses are of the popular character ; nevertheless they are of great educational value. Free public libraries were founded in a good many villages in New England and New York during the Educational Awakening ; but the movement had no great growth till Andrew Carnegie began founding libraries toward the close of the nineteenth century. By 1910, two thousand libraries had been established through his

gifts, every part of the country being represented. The phonograph and player piano have contributed immensely toward the popularization of music; the arts of photography and printing have made cheap copies of good pictures easy to secure, and have filled the popular magazines, especially the advertising sections, with pictures, many of which are very good. Perhaps the advertising calendar deserves special mention in this connection. And the invention of the moving-picture machine and the presence of the "movies" everywhere has had an immense influence in molding public opinion among the masses of the people. A beginning has now been made in the use of the moving picture as an aid in schoolroom teaching. This will carry the Pestalozzian principle of objective teaching into a new field. When socialized (that is, conducted for purposes of education and wholesome recreation rather than for private profit) the cinematograph promises to be one of the most useful accessions to the instruments of popular education.

The Professions. — Modern civilization is characterized by the rise of specialized professions. That is because science is coming to dominate life, and the leadership of society is being given to men of exact knowledge. In a superstitious age "medicine men" and priests are in the ascendancy; in a military age, the soldiers; but in a scientific age, the scientists. Nothing, therefore, is more clearly typical of the new civilization than the growth of facilities for professional

education, which has been among the most striking educational characteristics of the past generation. The scope of the professions has been broadened by the development of modern sciences. It is becoming increasingly necessary for a professional man to know not only the technique of his profession but the modern complex social world in which his profession is to be applied. The so-called "learned professions" have, therefore, become more learned, and many new professions have made their appearance. The standards of education for clergymen have been gradually raised, and theological seminaries have adopted the modern scientific point of view and substituted social sciences quite largely for metaphysics.

Law. — During the decade between 1890 and 1900 the number of law schools nearly doubled, and the number of students increased 180 per cent. During the next decade there was another increase of 50 per cent in law students. The course has gradually been lengthened, and entrance requirements raised. Still even yet college graduation as an entrance requirement is exceptional rather than usual, and "nowhere in the United States is attendance at a law school a prerequisite to admission to the bar." Improvement in standards will doubtless have a tendency to decrease the number of schools.

Medicine. — So far as scientific professionalization is concerned medicine has always been somewhat in advance of the other learned professions. Recently,

under the leadership of the American Medical Association, considerable effort has been made to standardize medical schools. Standards have been raised, and the number of schools decreased; which means that many of the poorer ones have been eliminated. The remaining schools have been classified as A, B, or C schools, according to their entrance requirements, and the length and quality of their teaching. In 1914 about one third of the institutions required at least two years of college work for entrance; and a four-year course leading to the degree of Doctor of Medicine was the standard of the Association of American Medical Colleges. There has been a strong tendency for medical schools to associate themselves with universities and hospitals; clinics in connection are now the rule, though there are still some exceptions, and state requirements for license to practice are being raised. Women are freely admitted to the study (in most schools) and practice of medicine.

Engineering.—The great development of industry since 1890 has led to a corresponding development of engineering education. Engineering is now specialized, as follows: civil engineering, with its subdivisions of hydraulic, railroad, structural, landscape, sanitary, and topographical engineering; mechanical engineering, subdivided into mill, marine, and structural; mining engineering, a special branch of which is metallurgical engineering; electrical engineering; and chemical engineering. And out of these have developed

conservation, production, and publicity engineering, and industrial management. The Commissioner of Education in 1916 reported sixteen independent schools, employing 762 teachers, with 6807 students. The following table shows the growth of this type of education :

GRADUATES FROM ENGINEERING COLLEGES

Prior to 1870	866
From 1871 to 1880	2,259
From 1881 to 1890	3,837
From 1891 to 1900	10,430
From 1901 to 1910	21,000
From 1911 to 1915	17,300

Foreign Education. — Except for our phenomenal growth in free secondary education Europe has experienced a development since 1890 quite similar to our own. Most of the items discussed in the last three chapters would receive an analogous discussion in a history of the education of western Europe. The Commissioner of Education quotes (1913) the following letter from Professor C. A. McMurry :

“Nearly all the important problems that we are struggling with in American schools are under lively, and almost too lively, discussion in Germany, only from the standpoint peculiar to German conditions; for example, vocational training, education of women, coeducation, experimental psychology, the common school as a basis for all schools leading to higher instruction, such as colleges, universities, and technical schools, moral and religious education, place and function of the fine arts, and university education. I was astonished at the vigor and incisiveness of the discus-

sion on all these points. I think it is also correct to say that in nearly all these respects they are tending very rapidly toward some of the results which we have already reached in America; for example, coeducation, the overthrow of the old classics' monopoly in education, introduction of construction and manual training in the schools, etc. Religious education is also being very vigorously discussed. From the current literature of education one gets a very strong impression that German writers on the subject are nearly always men of large and rich experience in practical educational work, and that they possess a sort of philosophical balance which prevents them from extreme radicalness or onesidedness."

This letter may be regarded as typical of the educational situation throughout western Europe at the time.

The English Education Act of 1902. — England took a revolutionary step forward in 1902. By this law the "voluntary" schools (see p. 184) were given the benefit of local taxes as well as the "board" schools. This abolished the difference between the two, and gave England, finally, a modern, democratic system of free, public, tax-supported, elementary schools. At the same time England also took another step forward. For centuries secondary education had been by private foundation. The nine "Great Public Schools" of England were and still are the most aristocratic private schools in the world. Prior to 1900 a good many private schools came into existence, some of them very good and some of them very bad. City governments also had established public secondary

schools. But the law of 1902 provided for the establishment of new secondary schools, to be supervised and supported in part by the central government. A great many new schools were established under this law. At the outbreak of the Great War England was at about the same stage in the development of public secondary education that we were thirty years before. Germany and France have retained their old system of secondary schools without much change except that the programs of study have been made more flexible so as to postpone the students' choice of a career. Continuation schools have made considerable progress, and the secondary education of girls has had a wide extension. This description traces the development down to about 1914; current tendencies will be noted later.

China.—The most spectacular educational revolution of the recent period, possibly of all history, has occurred in China. For thousands of years China had maintained a peculiar system of education based on the memoriter study of the Confucian classics, and culminating in great triennial examinations, by which the officials of the Chinese government were selected. Thus the ancient régime was conserved. In 1898 western science was introduced in these examinations along with the Chinese classics. In the same year the Emperor ordered the establishment of a Board of Education, a University in Peking, and a college in the capital of each province, together with a

public school system in two of the provinces. While this system was by no means so complete and universal as our western systems it was a substantial beginning. Modern, western textbooks have been gradually adopted in the old-fashioned elementary schools held in connection with the temple in every Chinese village. China now has a large number of colleges, universities, and medical schools. The education of girls has been encouraged since 1906. Recently free schools have been opened in every city in the country for children who cannot afford to pay for their education.

CHAPTER IX

THE RECENT PERIOD

B. Enriching the Curriculum

IN the preceding chapter the discussion of changes in the course of study was postponed. The enrichment and modification of the curriculum in the past thirty years has been so very great that a whole chapter may well be devoted to the subject. Important changes have been made in the organization and teaching of the older subjects, new subjects have been added, and the program of school activities has been extended so that the actual "studies" are but a part of it. It is a good thing for the teacher to know what these changes have been because such knowledge will help in an understanding of the new tasks that the schools are trying to accomplish.

The "Common Branches": Reading. — First, the so-called "common branches" that were taught thirty years ago are still taught, of course, because they are of fundamental importance. But they are taught quite differently. Methods of teaching children to read have undergone considerable modification. The old alphabetic method has passed away; and the word and sentence method have come into general use.

In the change from the old to the new, several artificial and faddish methods were experimented with for a time. We now know that words and sentences are what the child is interested in; the letters are to him meaningless and artificial subdivisions of the word. Gradually the child comes to understand that the letters are symbols of sounds, just as the printed words are symbols of things; then he is ready for phonic drill. The technique of phonic drill has been made more efficient in recent years. In the past ten years we have come to pay less attention to oral reading than was customary a generation ago, and more to silent reading. We now realize that the reading ability that one has most use for is the sort that will enable him to get the meaning rapidly from the printed page. Hence the modern teacher has developed a technique of teaching rapid sight reading.

About 1890 it began to be pointed out that the reading books in particular, and the whole elementary program of studies in general, were not nearly so rich in valuable material as they might be. President Eliot of Harvard conducted an experiment which brought this out very clearly. Concerning this experiment he wrote:

"I procured two careful estimates of the time it would take a graduate of a high school to read aloud consecutively all the books which are read in this school during six years, including the history, the reading lessons in geography, and the book on manners. The estimates were made by two

persons reading aloud at a moderate rate, and reading everything that the children in most of the rooms of that school have been supposed to read during their entire course of six years. The time occupied in doing this reading was forty-six hours. These children had, therefore, been more than two solid years of school time in going through what an ordinary high-school graduate can read aloud in forty-six hours."

Such criticisms as this gave rise to a search by teachers for real literature suited to the needs and interests of children. The result may be inferred from the following quotation from C. A. McMurry's "Special Method in Reading," written thirteen years later, that is, in 1903 :

"With the increasing tendency to consider the literary quality and fitness of the reading matter used in school, longer poems and stories like 'Snow Bound,' 'Rip Van Winkle,' 'Hiawatha,' 'Aladdin,' 'The Courtship of Miles Standish,' 'The Great Stone Face,' and even 'Lady of the Lake' and 'Julius Cæsar' are read and studied as complete wholes. Many of the books now used as reading books are not collections of short selections and extracts, as formerly, but editions of single poems or kindred groups, like 'Sohrab and Rustum' or the 'Arabian Nights' or 'Gulliver's Travels' or a collection of complete stories or poems by a single author, as Hawthorne's 'Stories of the White Hills' or Lowell's 'Vision of Sir Launfal' and other poems. Even the regular series of readers are often made up largely of longer poems and prose masterpieces."

Recently this movement has gone much farther in the same direction. Children are encouraged to read

widely, not only in the field of juvenile literature, but in fields collateral to the subjects that they study in school, especially history and geography. This collateral reading will be referred to again. The study of children's literature is now recognized not only as a part of the preparation of elementary teachers, but as a most valuable sort of culture.

Spelling. — Some reference was made in a previous chapter to Colonel Parker's hostility toward spelling books. The old-fashioned spelling books have passed almost entirely out of use. About thirty years ago written spelling was substituted for oral practice in spelling, because it is only when one writes that one needs to know how to spell. The habit needed is that of writing the word correctly. Later it became customary to select words from the daily work of the children, new words that they met in their reading and writing, and words that they were actually observed to misspell. This practice is now general. Only a few words are drilled upon each day, and the children are shown how to study a spelling lesson. A special technique for the teaching of spelling has now been evolved and this technique the teacher in training is expected to understand and to acquire skill in using.

Language. — During the past twenty years there has been an almost violent reaction against the study of formal grammar in the elementary schools. This reaction has undoubtedly gone too far. It has been said of Colonel Parker that he did some harm as well

as a great deal of good, and the extreme reaction against grammar is to be charged as much to him as to any other one person. The objection to formal grammar is the assumption that children can neither be interested in its abstractions nor expected to apply its rules in oral or written composition. The newer tendency is to teach correct forms throughout the grades by imitation and habituation. Even more emphasis is placed upon correct oral than correct written language. In the best schools pains are taken to "motivate" language work. For example, an exchange with pupils in a distant place of real letters descriptive of natural environment and forms of sport is used. The teaching of English in both elementary and secondary schools is, however, one of the unsolved problems in present-day pedagogy.¹

Arithmetic. — The "three R's" formerly monopolized the curriculum. The old-fashioned district school of sixty years ago had little else to offer. Consequently for boys and girls who remained in school winters through their 'teens something had to be devised to keep them busy. To this end arithmetic was extended far beyond its practical, everyday applications. Young men boasted that they had "worked through" "Ray's Third Part" (the advanced textbook of forty years ago) three or four times before they finally came of age and ceased going to school winters. Algebra and geometry were considered "academy" (that is sec-

¹ See U. S. Bureau of Education, Bulletin No. 2, 1917.

ondary) subjects and were rarely taught in the district schools.

This custom persisted after the schools were graded, and school attendance readjusted so as to keep children in school continuously through the eight grades. Accordingly arithmetic has been retained to the end of the elementary school. On the other hand the tradition that children attend school merely to learn to read, write, and cipher resulted in starting the teaching of arithmetic in the first, or at least the second, grade. Hence the child, caught between the upper and the nether millstones of this tradition, grinds wearily at arithmetic during his entire elementary school career; but probably learns no more than could be taught in a briefer time by efficient drill given at the right period on well-selected and well-arranged material. During the past few years considerable protest, more or less coherent, had been voiced against this situation, especially against the study of useless applications of arithmetic. There were two chief reasons for this: first, the demand that schooling prepare for the practical needs of life, and, secondly, the need of time for more geography, history, literature, and the new subjects that were being added. The following topics have been omitted or reduced: cube root, square root, greatest common divisor, least common multiple, true discount, partnership, compound proportion, surveyor's measure, troy weight, apothecaries' weight, taxes, insurance, bonds, stocks, partial payments, bank dis-

count, compound interest, longitude and time, ratio and proportion, and mensuration. Instead, a great deal more emphasis has been placed upon skill in the fundamental operations and on the application of arithmetic to practical problems. This is in response to the complaint of business men that young employees were shockingly inefficient in the fundamentals of arithmetic. The technique of teaching the fundamental operations is rapidly being reduced to an applied science, largely through the influence of the standard tests.

In the past few years there has grown up a strong tendency to teach in the eighth grade a combination of arithmetic, algebra, and geometry, with special reference to their practical applications. This tendency is largely due to the junior high-school movement. It remains to decrease the amount of formal arithmetic prematurely taught in the first four or five grades; a change that would give the needed room for much desirable content material, and rescue a considerable fraction of school life from the bugbear of effort without interest.

Geography. — As was pointed out in a previous chapter (p. 50), geography had little place in the common schools a hundred years ago. It gained ground steadily throughout the century, and secured a recognized place in the elementary school soon after the Civil War. By the middle of the eighties it was usually taught with two textbooks, the “primary” and the “ad-

vanced." The material offered was merely a catalogue of facts to be learned by memorizing. About 1894, however, a near revolution occurred in the method and content of geography teaching. This change was due partly to the Pestalozzian objective method; it was due in part also to a recognition of the fact that the conditions of industry, commerce, and the customs of people are largely a result of geographic conditions. For example, the existence of slavery in the South was due in part, at least, to conditions of soil and climate which were conducive to plantation farming; while its absence from the North was similarly due to a sterile soil and a rigorous climate that rendered large-scale farming unprofitable and to a climate in which white men could work hard without deterioration. Again: the location of Gary, Indiana, and the vast industrial development of Cleveland, Ohio, were alike predetermined by the natural deposits of iron ore at the head of Lake Superior, and of coal within easy reach of Lake Michigan and Lake Erie. Such relations and causal connections, it was contended, children could easily be led to understand and appreciate. It might be added in passing that the physiographic theory,¹ as the theory just described is called, is accepted with many more qualifications than it was a few years ago. We are now coming to see that business and social conditions depend upon the intelligence and morals of the people quite as

¹ See Todd's "Theories of Social Progress," Chapter IX.

much as upon the soil and climate, important as these are.

This change in the method of teaching geography was first represented in this country by Guyot, a disciple of Pestalozzi, in 1866. While Guyot's textbooks were in advance of their time, the life side of geography has been increasingly emphasized since 1900, and again Colonel Parker was an influential factor in determining this reform. The teaching of geography has gradually tended away from the memoriter method, with increasing attention to helping the child infer for himself the life conditions that the earth conditions of a given region would give rise to. In connection with this new method a great deal of attention has been given to observation, excursions, "type studies," and inductive teaching. In harmony with these Pestalozzian methods it has become customary in recent years to begin with home geography. By familiarizing the pupil with geographic conditions so close at hand that he can readily see them for himself, the subject is given a reality that would otherwise be impossible.

The teaching of distant countries by the use of descriptive literature suitable to the interest of children is another recent development that deserves encouragement. As Professor Bobbitt points out¹:

"We are here only saying that that portion of the world which lies beyond the horizon is also to be given the greatest

¹ "The Curriculum," p. 235.

possible degree of reality in the minds of the children. Abstract didacticism does not give them this sense of reality. A half-page exposition of the cod-fishing industry, for example, off the banks of Newfoundland gives the children no essential realization of the nature of that industry. Let them, however, read Kipling's 'Captains Courageous' and thus indirectly participate in the various activities and experiences of the fishing fleet off Newfoundland, and they will have come into contact with that type of human experience almost as efficaciously as if they had been actually upon the waters. Let them in the same vivid way travel in spirit across the wide plains of Russia, up the rivers of China, through the jungles of Africa or Brazil, across the Polar ice-fields, with the ore-fleets of the United States Steel Corporation, live upon the cotton plantations of the South, the great wheat farms of the Northwest, in the timber regions of Georgia and Oregon, etc."

The importance of geography has been coming to fuller recognition throughout the period. Some enthusiasts, notably Colonel Parker, have made it the very core of the curriculum. The development of modern communication makes it important for many reasons. Many businesses involve relations with distant countries. Being near neighbors to all the world, we need to get acquainted. If a League of Nations is to work well its success will depend in great measure upon such acquaintance. As Professor Bobbitt contends, the "we-feeling" must be enlarged to include all peoples. In the high schools commercial geography has recently been added to physical geography, and we are now ready for what might be called social geog-

raphy, devoted, as the name suggests, to a description and appraisal of institutions and the living conditions of the people, especially in our own country. This would prove a valuable introduction to social science in secondary education.

History. — Since 1890 history teaching in the elementary school has been greatly modified; and the change has come about largely through the influence of the Herbartians, whose theories, as described in a previous chapter (p. 88), became quite generally accepted twenty years ago. About 1890 it was customary, as has already been stated (p. 156), to teach American history only in the seventh and eighth grades. As the majority left school before they reached those grades very little history was really taught to the masses of the people. The new history program began to take shape following the work of the Committee of Ten of the National Education Association, which recommended (1893) four years in the elementary and four years in the secondary school. Programs were soon afterward outlined by certain representative and influential schools, particularly those connected with Columbia and Chicago universities, which provided history material from the third to the eighth grades inclusive. In the lower grades the work consisted of stories illustrative of the life of primitive, ancient, and medieval peoples, and in the upper grades of American history with its more immediate European background. Some such program as this has been in

pretty general use for fifteen or twenty years, depending upon the progressiveness of the school. Recently the tendency has been to begin with home history and the primitive life of the American Indians. In this connection there has been a marked increase in the use of objective, illustrative material. The report of the Committee of Ten had as much influence upon the teaching of history in the high school as upon elementary practice. The amount of history taught and required has been considerably increased, and the emphasis has been shifted from "general" history to modern, especially American history.

Hygiene. — Thirty years ago children studied physiology, as it was then called. The emphasis was chiefly upon the elements of anatomy. In some schools they learned, for example, to name all the bones of the body. At that time hygiene was taught only incidentally. To-day the emphasis is primarily on practical hygiene, with considerable attention to the bacteria that are responsible for common diseases, especially contagious diseases, and also to the social coöperation necessary to successful sanitation, thus establishing a close connection between hygiene and civics. This change in the contents of school hygiene has been brought about quite gradually during the period. Meantime state law almost everywhere has required instruction in the effects of nicotine and alcohol. No doubt this was a contributory cause of the temperance reform that brought about the Eight-

eenth Amendment to the Federal Constitution. During the past five years interest in health work and physical education has increased rapidly and a great



Courtesy of the American Red Cross and The People's Institute of New York City.

HEALTH WORK IN THE SCHOOLS.

development in these types of work is sure to occur in the near future. An important feature of the development has been the emphasis upon training in

health habits, — regular hours of sleeping, regularity in eating and in attention to the bodily functions, regularity in bathing and in cleaning the teeth.

Social Studies. — The tendencies just described in geography, history, and hygiene were the beginnings of a movement in the direction of the teaching of the sociological subjects. Geography has consisted increasingly in a study of industrial and social conditions. In history the tendency is away from the chronicles of kings toward an account of the life of the common people. In hygiene more and more attention is being given to the coöperative action necessary to preserve the health of the community. During the past ten years community civics, so called, has come into prominence also.

“The aim of community civics is to help the child to know his community — not merely a lot of facts about it, but the meaning of his community life, what it does for him and how it does it, what the community has a right to expect from him, and how he may fulfill his obligation, meanwhile cultivating in him the essential qualities and habits of good citizenship.”¹

While community civics places chief emphasis upon the local community, it does not ignore the wider groups. This new subject is supplementing, and to some extent supplanting, the older civics, and is being taught in the upper grades of the elementary school as well as in the high school. Besides this, intelli-

¹ U. S. Bureau of Education Bulletin, 1915, No. 23, p. 11.

gent teachers are increasingly emphasizing the social import of all the elementary studies, and introducing more coöperative methods in the government and especially the discipline of the school. The aim of all this is to prepare the child for civic and social duties.

Art. — During the eighties drawing was but little taught in the public schools, and then only as mere copy-ing. Next came a formal system of practice in drawing "type solids," such as spheres, cubes, and cylinders (cf. p. 171). The aim was double, the practice was supposed to give manual control, and the solid forms were supposed to be typical, so that if the pupil learned to draw them he would be able to draw any object in nature. However, little or no attempt was made at application. Commercial concerns drove a lucrative trade in "type solids," and vigorously opposed the reform that began about 1900. Due in part to the inductive method advocated by the Herbartians, art teachers began to conceive the idea that children could make pictures. The influence of Colonel Parker and Professor Dewey suggested the use of drawing as a means of expression, thus making it a handmaiden to the teaching of other subjects. Psychology has recently shown that children have a strong instinctive tendency to express what they have seen or imagined, not only in drawing but also in plastic art, cut paper, or other kinds of construction involving form and color. More recently drawing and design have come to be taught in close correlation with industrial train-

ing and domestic art. Increasing emphasis is now being placed upon artistic appreciation as applied to the common things of life, such as dress, house decoration, and local surroundings. Thirty years ago art instruction in school meant formal practice in the elements of drawing; to-day it includes not only training in the appreciation of the beautiful, but, more than



Courtesy of the Victor Talking Machine Company.

TEACHING MUSICAL APPRECIATION.

that, it stimulates an ambition to be surrounded with beautiful things, and develops the incentive and sometimes the ability to create beauty. There is no phase of school activity that is more capable of enriching life.

Music. — In the teaching of singing a change has occurred since twenty-five years ago quite similar to the change in the teaching of reading. Then text-

books consisted of formal exercises with but few songs. The aim was to teach children to read notes. Now, as in reading, the thought is presented first; later it is broken up into its parts. Phrase reading is encouraged. Children sing at first folk songs instead of formal exercises. Attention is given not only to sight reading but to musical appreciation and to a knowledge of composers. The phonograph has come into quite



INSTRUMENTAL MUSIC TEACHING IN HIGH SCHOOL.

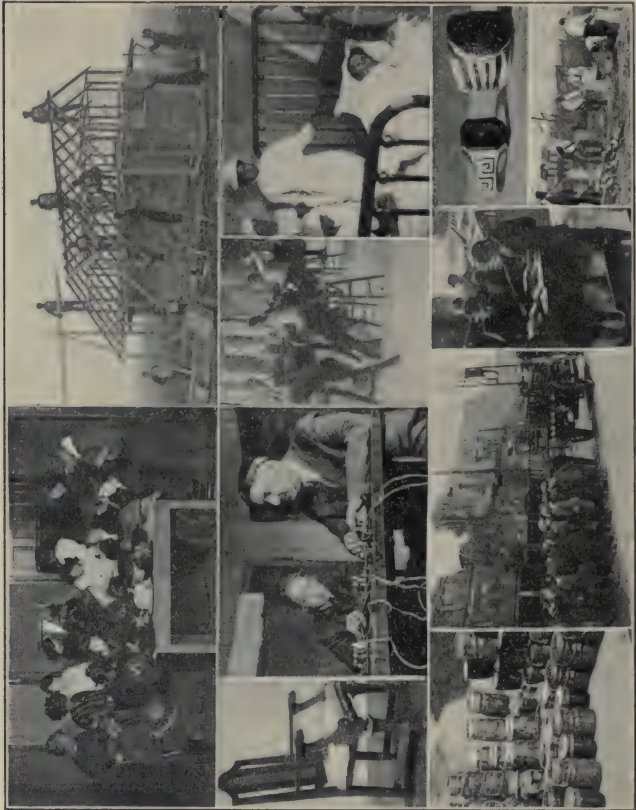
general use as a means of acquainting children with good music. Osborne McConathy, supervisor of school music at Chelsea, Massachusetts, is said to have been the first to give orchestral lessons after school. That was about 1905; since then the practice has become quite general. This has led to coöperation between supervisors of school music and conductors of community music and of city orchestras. Recently some progressive schools have undertaken to give free class instruction in violin or piano. This is, no doubt, an important beginning. The common practice of em-

ploying private tutors suggests that musical education is a century behind the times. Instruction in the use of musical instruments should be as free in a democracy as any other form of cultural training. The introduction of free instrumental music teaching indicates that we are moving in that direction.

The Demand for Industrial Education. — Industrial education is winning an ever larger place in the program of our schools. This is due, of course, to the industrial development of the past generation. Our industries require a great variety of skilled specialists; but the apprentice system has no place in modern industry. Employers feel that trained workers ought to be furnished them; young men and women are increasingly impressed with the helplessness of the unskilled worker; and the public is coming to feel that democracy tacitly guarantees each citizen an opportunity to learn some trade. Hence the growing sentiment in favor of vocational education, though its proper place in our system of public education is as yet an unsolved problem.

What the Schools Are Doing. — Commercial work and manual training were introduced during the Transition Period (see p. 157); but manual training was not generally taught in the public schools until the first decade of the present century. Domestic science, though it had a later beginning, became general at about the same time. Aside from these three subjects industrial education has developed only here and there. There were a very few evening trade schools prior to

1890. In general these were private schools; and in them the principal subject was drawing, though gradually science, mathematics, technical subjects, and shop



VOCATIONAL PROJECTS.

courses were added. Gradually evening trade schools became part of the public-school system, especially in the larger cities; many of them now teach the follow-

ing trades : carpentry, cabinet making, pattern making, blacksmithing, plumbing, machine-shop work, printing, free-hand, architectural and mechanical drawing, machine designing, applied electricity, steam engineering, electrical wiring and installation, industrial chemistry, applied physics, advanced dressmaking, millinery, and domestic science. Day trade schools, either public or private, that aim to take the place of apprenticeship, are not very common, though a few have grown up in the large cities during the last ten years (see p. 246). The chief obstacle is the difficulty of attendance on the part of young workingmen. The part-time plan is in use in a few cities. There are only a few technical high schools. In fact the whole problem of industrial education has scarcely been attacked as yet ; but its solution is one of the most pressing demands of the present times. Industrial education will undoubtedly be one of the chief developments of the near future.

The Smith-Lever and Smith-Hughes Acts. — The Smith-Lever Act of 1914 and the Smith-Hughes Act of 1917 mark important beginnings. The Smith-Lever Act was, like the Morrill Act of 1862, and the so-called Second Morrill Act of 1890, an extension of agricultural education through federal aid. It provided for the county agricultural agents, and also for the extension of club work among children. The Smith-Hughes Act was a liberal grant of federal money for the extension of industrial education in urban communities, and agricultural education in rural com-

munities. With respect to industrial education it initiated a new policy on the part of the federal government.

Corporation Schools. — Preparation for the artisan trades was formerly provided for through the apprenticeship of boys to master workmen (see p. 17). During the period of apprenticeship, which usually extended over several years, the learner served as a helper, gradually acquiring skill in the various processes of the trade. The Industrial Revolution led to a greater specialization of industry and rapidly reduced the proportion of independent artisans who were in a position to employ one or two "journeymen" and to take on a few apprentices from time to time. This change from hand work to machine work and the displacement of the small shop by the factory greatly altered the character of industry. Where formerly the artisan had followed through a piece of work from start to finish, he came now to concern himself more and more exclusively with certain fractions of the process. As a result, the work became mechanical and deadening; and the worker himself, having often no knowledge of processes other than the few that he was held responsible for, lost interest in his piecemeal job. Apprenticeship under these conditions was also unnecessary in many cases, for the limited amount of skill required for any fractional process could be gained within a very short time. As a means of overcoming these and other evils brought about by the development of factory methods, many

large corporations now conduct schools in which new workers not only are given skill in some particular phase of the industry, but are also instructed in the operation of the industry as a whole. Sometimes, too, these "corporation schools" provide courses of a more general character to supplement the personal and civic equipment of their employees. The oldest American corporation school is that of the R. Hoe Printing Press Company, in New York City. This school was established in 1875. The movement did not gain much headway, however, until 1905; since that date, the corporation schools have multiplied rapidly until now practically all of the large industrial establishments and many commercial and mercantile houses have well equipped and well staffed educational departments in which their prospective employees are fitted for their jobs. This phase of education is not as yet under public control or supervision, and is consequently open to criticism on the ground that the best interests of the workers may be sacrificed for the benefit of the employing corporations. In notable instances the corporation schools are governed by most commendable educational ideals. Whether the state should assume some measure of oversight in this field remains an open question.

Army Schools. — As a result of their experiences in the army practically all the officers and men became profoundly impressed with the importance of recreation as a means of keeping up the morale, and also with the

deplorable lack of training on the part of the majority of the soldiers for any particular kind of work. In addition they were impressed, as was everybody else, with the high percentage of illiteracy and with the great need for Americanization. As a result there were established in 1919 army schools in connection with all the posts. These schools are in charge of Education and Recreation ("E & R") officers who are responsible to the post commandants. Experts in the various trades are employed as teachers. The whole system is under the general supervision of well-trained educators, educational specialists in various lines are retained as consultants, and the most recent pedagogical theories are applied in practice.

In these army schools some one hundred and fifty different trades are taught. The shop equipment for this work is very remarkable indeed, especially as compared with the meager equipment for vocational education in the public schools. The explanation is that during the war a great variety of skilled workmen were needed by the army, and they had to be trained in the army itself. It was absolutely necessary, of course, that the equipment for this training be adequate to meet the practical demands of the emergency. At the close of the war this extensive equipment was on hand, with nothing whatever to hinder its being used in the new army schools.

The men are selected for the various trades that they are to learn not only with reference to their preferences,

but also with reference to their adaptability as ascertained by mental measurement, by new trade tests that are being devised for the purpose, and by interviews with trained and experienced advisers. Each man's personal history, trade experiences, and interests, as well as his grade of mentality, are taken into consideration in his guidance.

In addition to this vocational work provision is made for the complete elimination of illiteracy from the army, and also for a certain amount of elementary education, including civic training. As was intimated above, recreation is closely related to instruction. Wide publicity has been given to this new phase of education, and there seems every reason to anticipate that it will result in a considerable contribution to the movement for industrial education. L

Vocational Guidance. — Closely related to vocational education is vocational guidance, which is scarcely a dozen years old. Frank Parsons, Director of the North End Settlement in Boston, organized in 1907 a vocational bureau to help meet the demand for vocational advice. The work was later taken up by the Y. M. C. A., the Y. W. C. A., and the Commercial Club, and in 1909, by the Boston public schools. In the next few years several conferences were held, and the National Vocational Guidance Association was formed in 1913. Since that date this work has attracted the attention of educators generally. The movement will probably ally itself with the mental

measurements movement in psychology, and become, within a generation, an important part of our educational program. Its need is particularly emphasized by the fact that young people often, perhaps generally, drift into occupations without due consideration of the duties involved or of opportunities for growth, advancement, and ultimate success which the chosen occupation presents. As a result, many find themselves misplaced, while others, even if competent to the tasks required, are much better fitted for something else. The social wastage is enormous, for men and women who might otherwise use their talents to help society onward are restricted to types of routine work far below their abilities.

Extra-Curricular Activities. — The foregoing discussion has already led us outside of the curriculum. This was inevitable. Indeed, a very significant curriculum development has been the development of extra-curricular activities, because they indicate the rapidly widening scope of the school's responsibilities, and its increasingly vital and democratic relation to all the interests of all the people.

Play. — On the border line between curriculum and extra-curricular activities is play. The modern doctrine of play is indeed modifying the whole theory of education. In the Puritan philosophy there was little place for play; and our own fathers never got much further than to admit that "all work and no play makes Jack a dull boy." But a decided reaction

has set in during recent years. The function of play has been expounded by Spencer, Groos, Hall, and other thinkers; and numerous contemporaneous psychologists have studied the relation of play to the learning process. The doctrine of play is so closely akin to the Froebelian theories that its definition here is perhaps unnecessary. Suffice to say that play is being accorded an ever larger place in modern education. Games are used as devices for helping children to learn school subjects. Playgrounds are being carefully equipped and supervised by trained directors. Athletic activities and contests, which high schools began about 1900 to conduct after the college model (where athletics were used chiefly for advertising and sporting purposes), are at least being subjected to criticism; and indications of reform are beginning to appear. Neither as physical exercise nor as play can ordinary high-school athletics be defended.

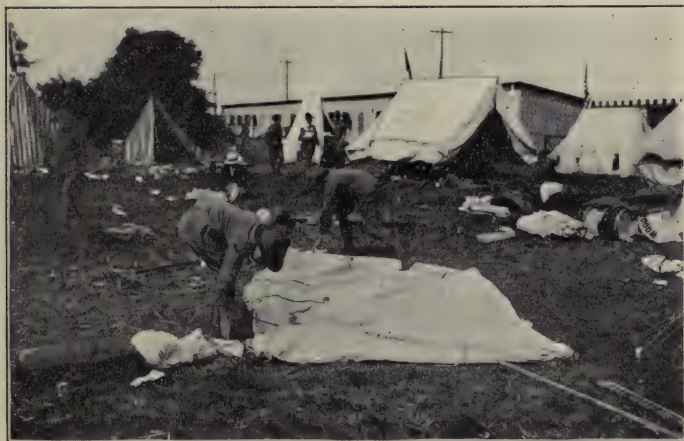
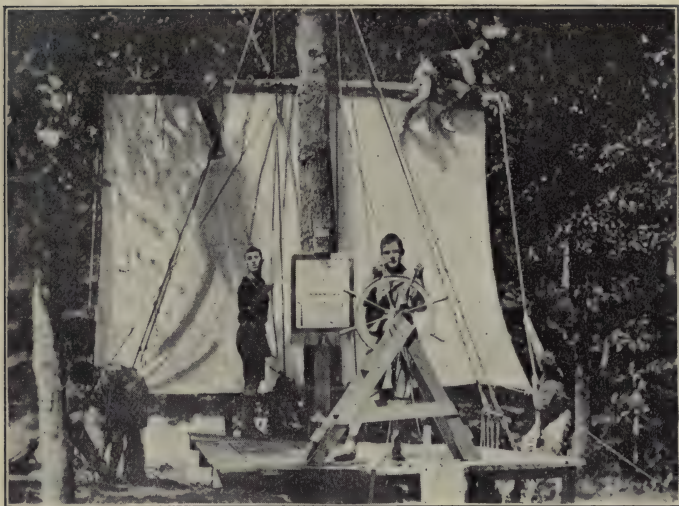
During the past two decades there has been a gradual tendency to extend the range and variety of student activities, especially in the high schools. Musical clubs, literary and dramatic entertainments, social gatherings, debates, exhibits, home projects, school papers, various intra-school athletic contests, and many other activities which depend largely on student activity, are being increasingly fostered. If wisely managed they embody for adolescents the aims of the Froebelian philosophy (see pp. 103-106).

Closely allied to these student activities are the

agricultural clubs for boys and girls that began to be organized here and there about the beginning of the century. These clubs were originally due to individual initiative, and appeared first in the South. Their state-wide organization was usually provided for by a state superintendent or an agricultural college. Under the Smith-Lever Act of 1914 this movement was taken over by the Federal Government. The object has been mainly to encourage agriculture by organizing boys and girls into competitive clubs for projects in corn, tomato, pig, or calf raising, or canning, garment-making or bread-making.

The Boy Scout Movement. — Mention of boys' and girls' clubs suggests the Boy Scout movement, which deserves to be more extensively incorporated in the public school program than it has been. There is no more promising application of the play theory to adolescent education. Dean Russell of Teachers College, New York City, says of it:

"I declare the Boy Scout movement to be the most significant educational contribution of our times. The naturalist may praise it for its success in putting the boy close to nature's heart; the moralist for its splendid code of ethics; the hygienist for its methods of physical training; the parent for its ability to keep his boy out of mischief; but from the standpoint of the educator it has marvelous potency for converting the restless, irresponsible, self-centered boy into a straightforward, dependable, helpful young citizen. Every task in scouting is a man's job cut down to a boy's size. . . . The appeal to a boy's interests is not primarily because he



Courtesy of Boy Scouts of America.

TYPICAL BOY SCOUT ACTIVITIES.

is a boy, but particularly because he wants to be a man. Scan the list: agriculture and angling, blacksmithing and business, carpentering and civics, dairying and mining, music and plumbing, poultry and printing, first aid and politeness, life-saving and nature study, seamanship and campcraft, patriotism and cooking, and scores of other accomplishments and activities requiring accurate knowledge that is susceptible of direct and immediate application to everyday life. To the boy that will give himself to it, there is plenty of work that looks like play, standards of excellence which he can appreciate, rules of conduct which he must obey, positions of responsibility which he may occupy as soon as he qualifies himself; in a word, a program that appeals to a boy's instincts, and a method adapted to a boy's nature."

This wonderful organization was devised in 1907 by Lieutenant-General Sir Robert S. S. Baden-Powell of England, and introduced into this country in 1910. It now enrolls about 370,000 boys. As yet, however, only an occasional school has adopted the scouting program as a part of its regular curriculum.

The Wider Use of the School Plant. — A well-known book on "The Wider Use of the School Plant," by C. A. Perry, begins with this paragraph:

"The children who went to school back in the eighties skipped out of the schoolhouse at half past three. . . . Instruction was finished for the day. . . . On Friday afternoon the premises were closed until the following Monday morning. On Saturday and Sunday the grounds were shunned as forbidden territory, and during the long summer months no one entered them, except possibly work-

men to make repairs. Within a couple of decades all this has changed. Public school buildings are now open in some places every week day in the year, . . . not only days but evenings. Classes occupy them during July and August. The schoolhouse is being devoted to a wider use. It has become a place where children may both work and play, where they may do things with their hands as well as pore over books; where youths can continue an uninterrupted education, and shop girls enjoy exhilarating physical exercises after the day's grind; where neighbors may gossip and mothers come together to learn how they can supplement the teacher's work in their own homes."

The following chapter titles indicate the wider uses to which the school plant is being put: evening schools, vacation schools, school playgrounds, public lectures and entertainments, evening recreation centers, social centers, organized athletics, games and folk dances, meetings in schoolhouses. The last chapter discusses the social betterment that may come from a wider use of the school plant.

Religious Education. — Greatly increased interest has been taken in religious education during the last twenty-five years, though largely outside of the public schools. The psychologists have devoted a great deal of attention to the problem, and parochial and Sunday schools have made considerable effort to make over their curriculums and methods in harmony with the findings of psychology and the practices of the public schools. Kindergarten methods, special methods in the grades (*e.g.* drawing, picture pasting, and drama-

tization), and the gradation of pupils and lessons are some of the significant developments in Sunday-school practice. Greater emphasis is being placed on appreciation and expression, and less upon mere memorizing and exhortation. This new movement has led to special departments of religious education in theological seminaries, to the rise of a vast literature on the subject, and to the organization, in 1903, of the Religious Education Association, the influence of which is now very important. The use of the Bible in the public schools has been a matter of much unfortunate controversy in the courts. Only a few states prohibit its use; the matter is usually determined by local sentiment or authority; and in practice the reading of the Bible is limited for the most part to opening exercises.

The Health Movement. — Thirty years ago the school assumed no responsibility whatever for the health of the school child beyond a little instruction in physiology of the kind described above and an occasional thought on the part of some teachers to the most elementary regulations as to ventilation and school hygiene. But to-day we seem to be moving toward the point where eventually the state will supersede the family as completely in the medical care of children as it has in their elementary education. That consummation is, however, indefinitely in the future. Still medical inspection promises soon to become a very important extension indeed of the func-

tion of the public school, because it will conserve the health resources of the nation, and also result in much larger returns on the investment in schooling. The movement began during the first five years after 1900, under the leadership of various private organizations. There have been three distinct stages in the development of health work in the schools. The first had for its purpose the detection of contagious diseases. The second went farther, and undertook to examine for non-contagious defects as well. This led to the discovery of an alarming prevalence of physical defects among school children. Recommendations were made to parents, in the hope that they would secure needed medical attention. This led to the third stage, in which medical supervision, at least of the preventive type, is provided by the school. The school nurse is now a usual attaché of the staff in most cities; and the movement is now spreading to rural communities. A few counties now employ a school nurse.

“Eye clinics, dental clinics, food clinics, clinics for orthopedic work, and even surgical clinics, have all been established in our various public school systems. Medical inspection of to-day includes four fields of endeavor: prevention of epidemics, the discovery and cure of physical defects, provision of healthful surroundings, and formation of correct habits of thought and action in regard to health.”

In connection with the third, courses in school hygiene are being developed in all normal schools and teachers’

colleges. Very recently the Federal Government has made special provision for the teaching of school hygiene in the normal schools. Under the last there is being worked out a system of physical exercise and physical education far superior to the old athletics. Much more attention is being paid to the hygienic aspects of school architecture. The school nurse is helping to educate mothers in their responsibilities for the health of their children. The school lunch is also becoming an important feature of many schools both urban and rural. The war has given an immense impetus to all phases of health work in schools.

The High School Curriculum. — Such, in barest outlines, has been the enrichment of the elementary curriculum during the past thirty years. A similar development has occurred in the secondary program. Since 1890 there has been immense increase in the demands made upon the public high school. This is due chiefly to the growing complexity of our civilization, and to new conceptions of the task of the schools. It was formerly assumed that the function of secondary education was chiefly to prepare for college entrance; we are gradually coming to the opinion that secondary education is essential for all, and that it should afford at least an introduction to all phases of modern culture. This is now held to be “essential to the welfare, and even to the existence, of democratic society.”¹

¹ See Bureau of Education Bulletin No. 35, 1918, p. 29.

Naturally there has occurred a corresponding extension of the secondary curriculums during the recent period. Before 1890 history, English literature, and the sciences had been added to the old substratum of Latin, Greek, and mathematics. Manual training, domestic science and art, and business training were added about 1890. Later came agriculture, modern languages, music, and art, and more recently social science, industrial training, and the extra-curricular activities. In 1892 the Committee of Ten of the National Education Association was appointed; its aim was to secure more uniformity with respect to secondary-school studies and college-entrance requirements. This result it achieved. The report was based upon the disciplinary theory of education, and insisted that one subject was as good as another in value, provided that it was as well taught. The intention seems to have been to discourage short, superficial courses in supposedly practical subjects for students not intending to enter college, and to emphasize instead long intensive study of a few subjects. But the demand for practical subjects has proved irrepressible, with the result that high schools provide as liberal a variety of subjects as they are able to offer, the pupils being given correspondingly liberal privileges of election. The following is a typical list of subjects offered in a large modern high school. From this list the pupil makes up his program, certain "constants" being required of all.

GROUP I. LANGUAGE		GROUP V. SCIENCE	
Latin	(4)	Botany	(1)
Greek	(3)	Zoölogy	(1)
German	(4)	Biology	(1)
French	(2)	Physical Geography	(1)
Spanish	(2)	Physics	(1)
		Chemistry	(1)
		Geology	($\frac{1}{2}$)
		Astronomy	($\frac{1}{2}$)
GROUP II. ENGLISH		GROUP VI. MISCELLANEOUS	
English Composition	(2)		
English Literature	(4)		
Hist. Eng. and Am. Lit.	(1)		
Hist. Eng. and Am. Lit.	(1)	Music	(2)
		Freehand Drawing	(2)
		Vocal Expression	(2)
		Physical Training	(4)
GROUP III. HISTORY		GROUP VII. VOCATIONAL	
Ancient History	(1)		
Medieval History	(1)		
Modern English History	(1)		
General World History	(1)		
Am. Hist. and Govt.	(1)	Mechanical and Geomet-	
		rical Drawing	(2)
		Manual Training	(3)
		Domestic Science	(2)
GROUP IV. MATHEMATICS		Household Management	(1)
Algebra	(1, $1\frac{1}{2}$)	Bookkeeping	(1)
Geometry	(1, $1\frac{1}{2}$)	Business Practice	(1)
Trigonometry	($\frac{1}{2}$)	Shorthand	(1)
Surveying	($\frac{1}{2}$)	Typewriting	(1)
Business Arithmetic	($\frac{1}{2}$)		

The practice of generous offerings and liberal elections has gradually forced the colleges to make entrance conditions more flexible. Colleges are now

acceding to the demand that high school graduates, no matter what the contents of their high school course may have been, shall be admitted and encouraged to pursue "whatever form of higher education they are able to undertake with profit to themselves and to society."¹

Flexner's "Modern School." — A profound impression was made by the appearance in 1917 of a paper on "A Modern School," by Abraham Flexner. In this paper he asserted that the traditional subjects, Latin, mathematics, and literature, were not yielding returns proportionate to the time devoted to them. He advocated four general fields of learning: (1) science; (2) industry, including vocational education; (3) the social subjects, such as history, civics, economics, sociology, etc.; and (4) cultural subjects, including not only literature but art and music as well. While Mr. Flexner's proposals were not at all new to students of education, their publication aroused much discussion among laymen and served to promote further many desirable reforms that schoolmen had been urging for thirty years and more.

Higher Education. — There has been an even greater expansion in the offerings of colleges and universities than of elementary and secondary schools. Every conceivable interest of civilized man is now represented in their program of subjects (see pp. 186-190).

The Function of Education in a Developing Democracy. — These curricular modifications to which

¹ U. S. Bureau of Education, Bul. No. 35, p. 20.

we have referred have been made with only a vague notion of the goal toward which the schools should move. As a consequence, overcrowding and confusion have resulted from the struggle between the old and the new. Our schools are much like an awkward adolescent boy who has attained his growth physically, but who does not know how to conduct himself properly, much less the life work that shall presently claim his newly acquired powers. As Wells repeatedly asks in "Joan and Peter": "What are the schools up to?" The foregoing survey ought to help the reader to answer that question. American democracy is preparing to train its rising generation to share in all the varied interests and responsibilities of the new and higher civilization into which we are just entering. As was pointed out at the beginning of Chapter VIII, we are becoming more and more conscious that a new age is dawning. It will be utterly impossible for democracy to succeed in that new age unless the people have a much more liberal, varied, and practical education than has been necessary in the past. Hence the curricular changes and additions. Nor can democracy succeed unless all the people are accorded such an education. Hence the developments in school organization and the extension of material equipment. This is the machinery which the young teacher is called to help operate in behalf of American democracy.

CHAPTER X

THE RECENT PERIOD, 1890-1917

C. Educational Theory and Science

Herbartianism. — Herbartianism occupied the center of the educational stage in America during the nineties.

Ziller at the University of Leipzig, and Rein at the University of Jena, had maintained pedagogical seminaries and practice schools during the seventies and eighties. They taught the doctrines of Herbart,¹ developing his methods and working out an elementary course of study in great detail. Their influence was immense in Germany. Charles DeGarmo studied at Halle in Germany in 1886; Charles McMurry at Jena in 1887, and Frank McMurry at Jena in 1889. These three men became, within a few years, the leaders of the Herbartian movement in America. Upon their return they taught in the normal school at Normal, Illinois, of which John W. Cook was then president. DeGarmo published "The Essentials of Method," Charles McMurry, "General Method," and Charles and Frank McMurry jointly, "The Method of the

¹ To understand the Herbartian movement in America the student will do well to reread carefully the account of Herbart in Chapter V.

Recitation." For nearly twenty years these continued to be the standard textbooks on methods of teaching in American normal schools. Their influence was dominant. The National Herbart Society was organized in 1892, but later changed its name, becoming the National Society for the Study of Education. The annual programs of this society have ever since pertained to whatever subject was at the focus of pedagogical attention at the time, and their yearbooks are a sort of compendium of the history of educational theory during the recent period.

Under the stimulus of the Herbartian movement the five formal steps became the universally accepted formula for conducting the recitation. Normal school students everywhere prepared their lesson plans on that outline; and the method was pushed to such absurd extremes that it may properly be referred to as a pedagogical fad. We now recognize that the method of the recitation must vary with its subject matter and purpose; there can be no single formula that is suitable for all recitations. The popularity of the Herbartian lesson plan is explained by the fact that it reduced a very complex and difficult problem to a fictitious, but none the less welcome, simplicity. Neither recitations nor children are simple, however; they are both very complex. False simplicity is a usual symptom of the infancy of a science: educational science was then in its infancy; the Herbartian lesson plan was evidence of the fact. However, its

use encouraged the careful planning of recitations, and stimulated the scientific study of method.

The extension of history in the elementary curriculum to include not only United States history but general history also (see p. 236, Chap. IX), was due quite largely to the influence of the Herbartians, as was also the arrangement of the history material in the course of study. The increased recognition of the value of standard literature (p. 228) was also due in part to the same influence (cf. p. 88). The Herbartian doctrine of correlation (pp. 90, 91) was for twenty-five years accepted as the master key for unlocking all curricular problems. In 1895, the (N. E. A.) Committee of Fifteen, on elementary education, advocated correlation in its report as a solution for the overcrowding of the curriculum, which was then beginning to be felt because of the addition of new subjects. Due to these influences more or less consistent efforts have been made to teach geography and history together, arithmetic in connection with geography, and all these subjects in correlation with manual training and construction. One of the most thoroughgoing attempts to work out a curriculum on this plan, using geography as the central core, was made as early as 1894 by Colonel Parker. Almost all elementary courses of study now show this influence.

The culture epochs theory (see pp. 90, 91) has always been followed by the Herbartians in their efforts to arrange the subject matter of the curriculum, and the American Herbartians have been no exception to this

rule. In spite of its partial inconsistency, as already pointed out, it has figured very largely in the parlance of pedagogy since 1890; and the truth there is in it has helped to light up some of the otherwise dark places in child psychology.

Herbartianism is now quite largely superseded; but it made a very valuable contribution, not so much by solving problems as by raising them; the very inadequacy of its own solutions creating the necessity for better ones, once the problems were raised. Still another valuable feature of Herbartianism was the moral seriousness with which it approached the whole subject of education. As was pointed out in the discussion of Herbart, his conception of the aim of education was moral character. But to the term moral character he gave a social significance; it implied the ideals and habits that make one a desirable member of the social group. "Social efficiency" is the term that American pedagogy invented to express the Herbartian idea of the aim of education.

Pestalozzianism. — Pestalozzi has exerted very little direct and acknowledged influence during the recent period; indeed, the sixties and seventies were the period of Pestalozzian influence in America. Still Pestalozzi has been a silent partner in the development of school practice; the yeast has been gradually leavening the whole lump. Field excursions, nature study, demonstrations, the use of objective materials, and the emphasis upon sense experiences are all implications of

the objective method which he taught. The Pestalozzian principle is very much more widely applied now than it was thirty years ago ; and the end is not yet. Before 1900 a pronounced reaction had set in against the analytical method (cf. pp. 81, 170). The alphabet-syllable method gave place to the word and sentence methods of teaching reading. Children were set to writing words, drawing objects, and singing songs. The Grube fad in arithmetic was abandoned. Even piano teachers began to use attractive pieces that contained the scales and exercises. This reaction was due largely to the child-study advocates, who pointed out that the analysis of things follows the use of things, and that children more easily learn the wholes they can use than the parts into which adults analyze them.

The New Froebelianism: Colonel Parker. — The past thirty years have seen very great progress indeed in the application of Froebelian principles (see Chap. V) to elementary and secondary education. The new type of education, for which the new type of school-house (cf. p. 195) has been built, is in large measure an embodiment of the principles of self-activity and social-participation. As we have already seen (p. 173), the first great American disciple of Froebel was Colonel Parker. He not only advocated training in all forms of expression, such as gesture, voice, speech, music, construction, modeling, painting, drawing, and writing, but also put them into actual practice in the schools that he controlled. As has already been stated he

continued his work at Chicago till 1902, and was during the nineties the most influential advocate of self-expression in both theory and practice.

John Dewey. — Recently John Dewey has been the outstanding advocate of the new Froebelianism. He conducted a famous experimental school at the University of Chicago, beginning in 1896. Later he left Chicago to accept a chair in Columbia University, where, in connection with his work as professor of philosophy, he has expounded his pedagogical theories with increasing influence. His most important pedagogical book is his "Democracy and Education," published in 1916.

Dewey apparently believes that industrial activities have had more influence on the mental life of the race than any other activities. Accordingly he arranged to have the children play together at such occupations as represent the industrial history of the race. In this way he provided a series of projects of real interest to the child, the educative value of which arose from the "continual planning and reflection," and from the training which they gave in "coöperative and mutually helpful living." It is obvious that we have reappearing in these theories of Dewey the ideas of self-activity and social-participation first propounded by Froebel, the educative value of which has been explained. (See Chap. V, pp. 102-106.)

Professor Dewey's educational theories may be summarized as follows. The educative process must, for

both psychological and sociological reasons, consist, in the first place, of a series of problems that the child feels are vital to his own needs at the time. That is, it must involve self-activity, and interest. The educative process must be, secondly, a practice in co-operative social activity; school life must be a natural social life, in a sort of simplified miniature society. And, thirdly, Dewey, like Ward, insists that all the members of society must be given a liberal education, *i.e.* prepared to participate in all the knowledge and arts of civilization.

Appraisal of Dewey's Theories. — The value of Dewey's theories is not so much in their originality as in their timeliness and their social significance. Whereas Froebel advocated self-activity and social-participation largely for psychological reasons, — because they quicken the learning process, — Dewey ✓ advocates them because he sees in them a means of social salvation in the present crises. The rapid change and manifold complexity of modern society demand a new type of education, especially in view of the fact that responsibility is so much more widely distributed in a democracy than in the old autocracy. Without a new education the new civilization will fail. Dewey has devoted his life largely to the task of working out the philosophy of a new education suited to the new social life into which we are entering.

The social aim of interest, or self-activity, as he

advocates it, is to generate initiative, self-reliance, and the problem-solving attitude of mind on the part of candidates for citizenship. Dewey is a pragmatist; *i.e.* he believes that the sole test of a theory is whether it will "work." He looks upon life as a series of problematic situations, in which the business of the intellect is to solve the problem and make the adjustment. Social life also is a series of problematic situations; and the success of democracy, therefore, depends upon the ability of citizens to solve the problems involved in living together. Since there are so many social problems to solve, and since in a democracy it is the people who must solve the problems if they are to be solved at all, it follows that citizens must be trained as problem-solvers. This is a very salutary protest against the old-fashioned pedagogy with its memoriter methods, its mechanical drill, and its harsh insistence upon blind obedience. Children should be kept interested in their school work so far as possible, of course, and that possibility goes much farther than was dreamed of in the old pedagogy.

But just because this doctrine was a protest against abuses of which nearly all teachers were conscious, it has unfortunately been pushed too far, giving rise in some quarters to a "soft-pedagogy," in which certain of the absurdities of Rousseau have reappeared (*cf.* p. 33 ff.). There are problems which race experience has settled, and which children (or adults either, for that matter) can only harm them-

selves and society by experimenting with. Any fundamental rule of the moral law may be taken as an example. With respect to these it is as necessary as ever that children be taught to obey. There are some things, including ideals of duty and self-restraint, which race experience has demonstrated that children must acquire whether they are interested or not. Here effort, even under compulsion if necessary, is perfectly good pedagogy. The Dewey philosophy has done some harm, therefore, by its one-sided emphasis upon self-activity, although Dewey himself would admit all of the limitations to which we have referred.

The aim of social participation is to train for the teamwork of modern social life. The changes of the times have forced upon us vastly more coöperation than formerly. Indeed the necessity for teamwork ✓ is one of the most striking characteristics of the new age. Families are no longer independent in the old sense of supplying themselves with what they use; they depend for lighting, for disposal of sewage and garbage, for protection from fire, disease, and thieves, for education of their children, and for many other necessities, upon some sort of coöperative arrangement ✓ with their neighbors. Many articles are now bought that used to be made at home; many services once looked after by the individual for himself are now taken care of by special occupational groups; this involves getting along with the sellers of commodities and services, — a problem that has proved so difficult

in some cases that municipal, state, or government ownership is proposed as a solution — which would involve more rather than less coöperation! Methods of marketing, the division of labor, and the fixing of prices makes each of us a cog in the great economic machine, dependent upon all the others, and the success of the whole strictly conditioned by the dependability of each. Abuses like child labor, prostitution, and intemperance can only be abated by working together. There are many new sorts of experts and many new species of public servants whose services we have to make use of; they fail us unless they possess a ripe sense of personal responsibility. Public questions and political issues require that citizens consider the general welfare rather than their own private interest. International events are making it necessary for our nation to coöperate with other nations as never before. From all these and many other like considerations it follows that citizens need to be much more thoroughly “team-minded” than ever before. And since team-mindedness is largely a matter of habit the more teamwork practice young citizens can get in school the better citizens they are likely to become. This is the social function of social participation.

The least appreciated, but the most important, item in the Dewey philosophy is his emphasis upon liberal education for all. The success of democracy depends upon this. It is not enough for citizens to have the problem-solving attitude; they must have access to

the experience of the race. Knowledge is power, and in the distribution of knowledge lies the domestic strength of a democracy. Besides if democracy is to succeed it must fulfill its pledge of equal opportunity to all, and this is not realized when ten per cent are illiterate and the average have only a sixth-grade education. If social classes are to be fused, and the menace of class friction disposed of, the rich knowledge and culture of the race must be made the common heritage of all. Hence the importance of Dewey's demand for universal liberal education. It will be observed that this third point is an addition to the old Froebelianism, and more in line with Pestalozzi's contention that education might be used as a means of uplifting the masses.

The Extent of Froebelian Practices. — The extent to which the Froebelian principles have been incorporated into American school practice is hardly appreciated. The laboratory method of teaching science contains an element of self-activity; so do manual training and domestic science. Public programs, dramatics, glee clubs, bands and orchestras, all have the same philosophy at their core. All sorts of student activities, so called, in high school and junior high school, are essentially Froebelian; they involve both self-activity and social-participation. They should be given a very much larger place in secondary education. We shall never make a success of universal compulsory attendance at secondary schools until secondary education is very largely made over on Froebelian lines.

It is for this reason that scouting commends itself so favorably. The use of play has been discussed (p. 250); it goes without saying that that is Froebelian. Music in all its forms (including not only singing but orchestral work), clay modeling, drawing, construction work, "busy work," folk dancing, dramatization, the numerous "devices" used in primary work, are all



Courtesy of the Victor Talking Machine Company.

FOLK DANCING.

examples of self-activity; many of them, of social-participation, also. During the past three or four years motivation has been a very conspicuous topic in the professional press, and just now the project method is the fad of the hour. These are the current forms which the demand for self-activity is taking. It would be hard to imagine what school life would be like with all these new activities eliminated; but whoever can imagine such a school will be picturing

to himself the schools of a century ago, or even less. These changes have not always, perhaps not usually, been introduced out of a conscious discipleship of Froebel, but they are none the less Froebelian in spirit for all that; and we shall use and extend them all the more intelligently if we recognize them as such.

The Kindergarten.—The kindergarten has come into more nearly universal use in school systems; and its program has been modified to include activities which modern psychology approves as better adapted to the real interests of small children than were the mystical games invented by Froebel himself. Some kindergartners have adopted some of the materials and methods of Madame Montessori, an Italian teacher of young children, who attracted popular attention for a few years prior to the war. ✓

Psychology and Its Applications.—It is only during the recent period that psychology has won any appreciable place in educational science. Perhaps it would be more accurate to reverse the proposition, and say that only during the recent period has pedagogy risen to the status of a science, and that that is due primarily to the influence of the psychologists. James's "Principles of Psychology" appeared in 1890. This great work introduced into America a new type of psychology which undertook to explain human nature in terms of instincts and habits, emotions, sense perception and thought, rather than in terms of theological or metaphysical abstractions. This new

psychology has revolutionized our notions of human nature and has had a profound influence upon pedagogy.

Child Study. — A very important branch of psychology is child study. Rousseau taught (see p. 32) that the child's education should be determined by his inner nature at the various stages of his development. But until we know what those various stages are we can hardly follow Rousseau's advice any more intelligently than he prescribed. That information child study undertakes to ascertain and present in scientific form. G. Stanley Hall, President of Clark University, has been the leader in this movement. His great work on "Adolescence" appeared in 1904. Child study has very properly been an important branch of instruction in normal schools and colleges, as it imparts an intelligent, sympathetic understanding of infancy, childhood, and adolescence.

Educational Psychology. — Educational psychology undertakes to give an exact quantitative description of "man's original mental equipment, . . . the inherited foundations of intellect, morals, and skill, . . . the laws of learning in general, the improvement of mental functions by practice and their deterioration by fatigue, of the variations of individual men, . . . and of the influence of sex, race, immediate ancestry, maturity, and training in producing these variations." E. L. Thorndike began his monumental contributions to this branch of the science in 1901. Educational

psychology has since contributed immensely toward placing education on a scientific basis.

Mental Measurements. — Accurate measurement of mental phenomena and educational results is the keynote of this new science. Two Frenchmen, Alfred Binet and Dr. Th. Simon, in 1905, invented a very clever and original device for discovering mentally defective children, and grouping those of similar mental ability. The Binet-Simon tests have since been developed by Goddard, Terman, and others, till they can now be used to group normal children of different mental abilities. The scientific measurement of intelligence promises to be one of the most useful inventions in educational practice. "Instead of being born free and equal we are born free and unequal, and unequal we shall ever remain," so far as intelligence is concerned. Obviously the school program must be varied to meet the needs of children of various mentalities; some can never climb very far up the educational ladder; some have exceptional powers that should be accorded special advantages; while among the average mass there are various talents. Mental measurements will help teachers to classify such pupils accurately, and care for them intelligently in such matters as grading, selection of courses, moral direction, and vocational guidance. Recently analogous tests have been extensively used in the army; and it is now proposed to use them in lieu of entrance examinations to college. ✓

Standard Tests. — The traditional methods of grading pupils' work were too subjective, that is, they recorded too exclusively the variable opinions or even whims of the teacher. Examinations have been demonstrated to be notoriously unreliable; the marks of different teachers, and even the marks of the same teacher at different times, varying widely. The great need has been for some objective standard of measurement, that would be the same for all teachers, and so eliminate the personal element. Standard tests have been invented to remedy this defect. Four closely related values have been distinguished: the comparative, the diagnostic, the corrective, and the incentive values. The tests enable teachers or superintendents to compare class with class or school with school on the basis of established standards. They reveal defects that otherwise would not be discovered. Thus in one city it was found that too much attention was being given to spelling; in another handwriting was being overemphasized; another city fell below standard in all the drill subjects; while another was up to standard on the average but with too wide a variation among schools and classes. As a result of such findings pupils are reclassified, courses of study and methods of instruction are changed, time allotments to the different subjects are redistributed, or a new technique of supervision is installed. And finally, the pupils' pride in their own scores, or in the rating of their school, furnishes an admirable incentive for work, especially on the drill subjects.

Professor E. L. Thorndike is the pioneer in the field of educational measurements; *i.e.* in the application of exact scientific measurement to the results of teaching. The first scales appeared in 1908 and 1909. Since those dates scales and standard tests have been produced for most of the elementary and some of the secondary school subjects. Among the most widely known are the arithmetic tests devised and refined with remarkable skill by S. A. Courtis; the handwriting scale devised by Leonard Ayres; the scale for English composition constructed by M. B. Hillegas; and the "Kansas Silent Reading Tests," devised by F. J. Kelly. The development of mental measurements has indorsed and abetted the development of educational measurements, and the studies of elimination and retardation have created a demand for both. At the present time scales and tests are used in all but unprogressive schools everywhere. Their invention is regarded by educators as the most important recent development in pedagogical practice, since their use is transferring many educational problems out of the realm of mere opinion and into the sphere of exact science.

Psychology Applied to Classroom Management. — The old-fashioned textbooks on pedagogy were empirical, that is, they were based on mere common sense and rule of thumb. Since 1900 psychology has been applied to all phases of pedagogy; especially to class management and the technique of teaching. The

light that psychology has thrown on the importance, indeed the necessity, of interest in the mental life has greatly stimulated the tendency to reorganize the schoolroom on Froebelian lines. Similarly the emphasis upon individual differences has stimulated the demand for ungraded and special classes, and the mitigation of the "lockstep" grading system. The bearing of mental hygiene on program construction, curriculum making, pedagogical method, and personal relations is beginning to receive serious consideration also. And the psychologist's conception that a human being is a psychophysical unity is importing a new force to the old proverb, a sound mind in a sound body, and is giving physical hygiene a new importance in education. Discipline is also being approached as a psychological problem. This is illustrated by Miss Morehouse's classification of school offenses, and in the tendency to approach the "boy problem" from the standpoint of scientific child study. All this has come about within fifteen years.

Psychology and the Conduct of the Recitation. — Psychology has pushed the Herbartian formula for the conduct of the recitation to the wall; within the past decade subject matter has been classified into drill lessons, knowledge or reasoning lessons, and appreciation lessons, corresponding to the conative, cognitive, and affective aspects of the mental life. The laws of habit building have been applied to the first, the laws of thinking to the second; and, so far

as psychology has light to throw, it has been thrown on the problem of appreciation. This classification of aims and functions has rendered obsolete the term "general method." The subject matter of each school study has been subjected to analysis; and methods approaching psychological validity have been devised for teaching each phase of the curriculum. Books have been written on the teaching of the common branches, and special methods are being formulated for each subject. This analysis is being worked out in detail; for example, it is said there are an even one hundred separate and distinct habits involved in learning to add; and the behavior of the eyes in rapid reading has been accurately observed by the aid of photographs, and an approved method of teaching rapid reading devised from the findings. If the Herbartian reliance upon a single formula for all sorts of recitations revealed the primitive stage of educational science ten years ago the rapid development of the science in a single decade is evidenced by the minute analyses to which the teaching process is now being subjected. Standard tests are greatly encouraging and aiding this analysis, because they show in which subject, and which phase of each subject, a child is weak or strong.

Formal Discipline. — The disciplinary theory (p. 21) has also come in for no little discussion throughout the period. Psychological research has sought to ascertain the degree of "transference of training"; *i.e.* the ex-

tent to which training acquired in one field is carried over into unrelated fields. The conclusion appears to be that a given subject may have disciplinary value in two ways: In the first place, ideals of efficient workmanship are built up if the subject is well taught, and these may be carried over to other subjects. For example, if one learns what thoroughly accurate work means in Latin or manual training, one may apply the ideal in economics or bookkeeping. In the second place, some of the subject matter may be found to recur in other subjects, as Latin in all the Romance languages, or violin technique in the playing of other stringed instruments. In this way one may learn by wholesale, so to speak. As for the first of these values, *i.e.* right ideals of scholarly thoroughness, obviously it accrues chiefly from the quality of teaching rather than from the subject itself. It is a reason for teaching the newer subjects well, and not an argument for any one subject as against any other, so long as they are equally well taught. As for the second value, one learns "wholesale" from subjects that have the most general application in modern life. If economics has more applications than Latin, it has more disciplinary value, and not otherwise. It is with respect to their applicability in modern life that school subjects must stand or fall.

Accordingly it turns out that the word "disciplinary" helps us little, if any. It would doubtless clear the atmosphere to eliminate the word from peda-

gological discussion altogether. The meaning assigned to it by the new psychology is quite different from its meaning in the old faculty psychology. The old word does not name the new idea. Moreover, the word itself is an obstacle to scientific discussion. It names a utility that certain subjects, notably Latin and formal mathematics, are alleged to possess, whether they do or not. In short, the very subjects of whose utility and traditional halo the present age is most skeptical are intrenched behind a magic word, where they politely decline to give an account of themselves. It would seem desirable, therefore, to proceed directly to the scientific evaluation of subjects, both new and old, on the basis of their social utility. This is one of the tasks which educational sociology is now setting itself.

The Educational Survey. — The larger problems of school administration, as well as the pedagogical problems of the classroom, are now being reduced to a science also. This movement has been greatly stimulated by the educational surveys that have been conducted with increasing frequency in recent years, beginning about 1910. Surveys of most of the large city systems, and many smaller ones, have been made, as well as surveys of the higher institutions of several states.¹

The scope of an educational survey may be inferred from the following outline :

¹ In this connection the student will do well to familiarize himself with some of the most important educational surveys, as, *e.g.*, those of Gary, Cleveland. Salt Lake City. St. Paul, Portland, etc.

OUTLINE FOR AN EDUCATIONAL SURVEY ¹

- I. School Plant and Equipment.
 1. Facts about each building, *e.g.* dimensions, date of construction, material, cost, condition, fire protection, etc.
 2. Facts about each room, including hygienic conditions.
 3. Equipment of building as a whole.
- II. Organization, Administration, and Supervision.
 1. General organization, including a detailed account of the powers, duties, activities, and efficiency of the board, superintendents, principals, and other officers.
 2. Business administration.
 3. Educational administration, *i.e.* an appraisal of the teaching corps and of supervision.
- III. Course of Study.
- IV. The Child.
 1. School census.
 2. Enrollment statistics, for the purpose of showing how well the system succeeds in getting the children of the community into the school.
 3. Holding power of the school, including age-grade distribution tables (see pp. 288, 289) and other similar data.

¹ Abridged and adapted from the "Thirteenth Yearbook" (Part II, p. 26) of the National Society for the Study of Education.

4. Regularity of promotions.
5. Health measures, such as fire protection, sanitary precautions, physical education, hygiene instruction, and medical inspection.
6. The educational results. Under this heading standard tests are given in all the school subjects, and the findings presented in graphic form (see p. 290).

V. Teachers.

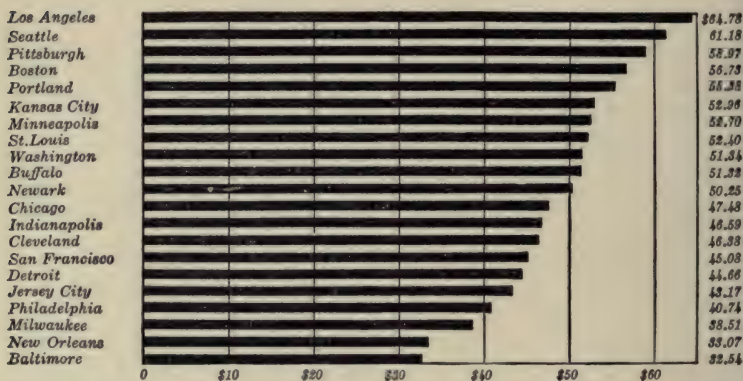
1. Data as to age, sex, training, experience, etc.
2. Tenure and permanency.
3. The work of the teacher, including number of pupils and classes per teacher, working time, etc.
4. Teachers' meetings.
5. Salaries.

VI. Finances. Under this heading financial records are appraised, expenditures are classified, and various unit costs (*e.g.* the per pupil cost of various subjects) are computed and graphically presented (pp. 286-288).

VII. Miscellaneous Items.

The Rise of a Science of Education. — The influence of educational surveys in the development of an exact science of education may be inferred from several facts. In the first place most of the important surveys have been conducted by the most prominent educational leaders of the day, such as Cubberley, Strayer, Judd, Coffman, Jessup, Hanus, Bobbitt, Ayres, Flexner, and others, including students whom they have trained.

These men are imbued with the scientific spirit and committed to strictly scientific methods; their names are guarantees that their work is scientific in character. Secondly, the scope of the above outline, and the minutia of detail, which cannot be shown in the outline itself (a dozen pages would hardly suffice for the detailed outline), suggest scientific analysis. The

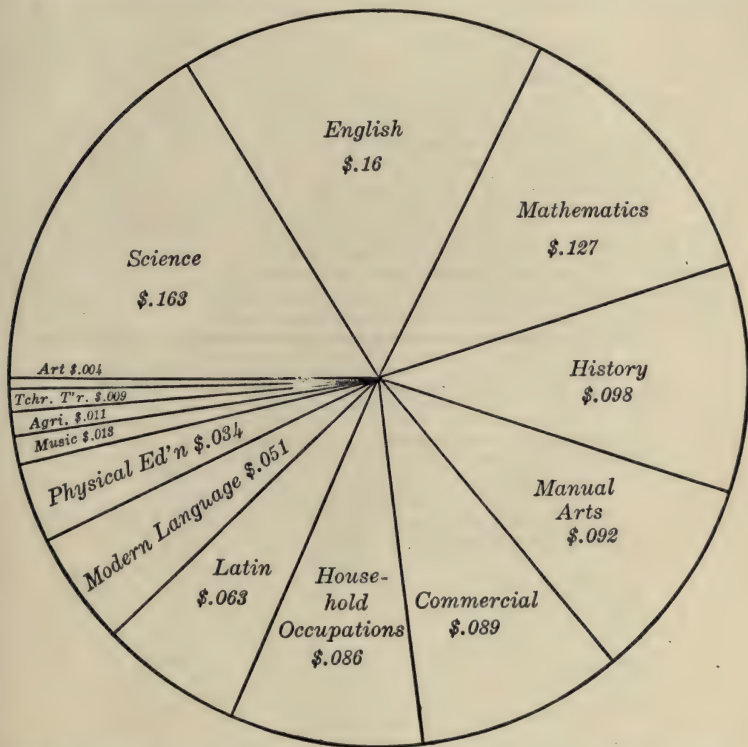


PER PUPIL-YEAR EXPENSE OF MAINTENANCE AND OPERATION IN
TWENTY CITIES. (From the *Boston Survey*, 1916, p. 156.)

scientific character of this work may be indicated, in the third place, by such typical illustrations of the treatment of data as follow.

Scoring Buildings. — On page 291 is part of a score card for scoring buildings. It is obvious that this card sets a standard (100 per cent), and assigns a definite proportion of importance to each feature of the building. Appraising buildings thus becomes as definite and scientific a procedure as scoring cattle.

Costs. — Scientific methods of statistical research are now being applied to the study of costs in educa-



WHAT THE HIGH SCHOOL DOLLAR BUYS (based on a study of ten towns in South Dakota. See *Educational Administration and Supervision* for November, 1918, p. 454).

tion. Three charts are printed herewith to illustrate how the findings are graphically presented.

Age-Grade Distribution. — A typical age-grade distribution table for a small school is shown on

this page, and a graphic presentation of acceleration and retardation, on the next. The percentages of retardation are obviously a serious matter; to ascertain the



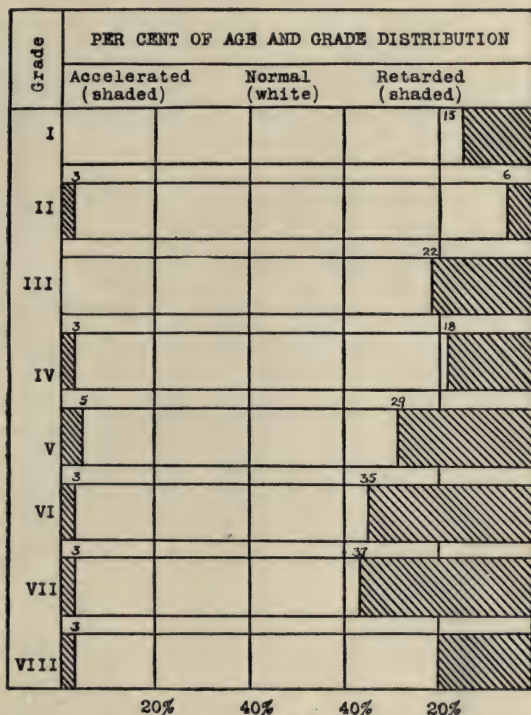
COST OF HIGH SCHOOL INSTRUCTION PER PUPIL-HOUR IN TEN SOUTH DAKOTA TOWNS.

AGE AND GRADE DISTRIBUTION TABLE
(Filled out for the schools of Carrington, N. D., by Supt. A. L. Schafer)

GRADE													
AGE	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Total
6	17	1											18
7	6	22	0										28
8	4	7	14	1									26
9		2	4	19	2								27
10			5	8	12	1							26
11				5	15	16	1						37
12				1	7	12	9	1					30
13					5	4	10	14					33
14						1	7	10					18
15							4	5					9
16							1	0					1
17													1
18													
19													
Total	27	32	23	34	41	34	32	31					254

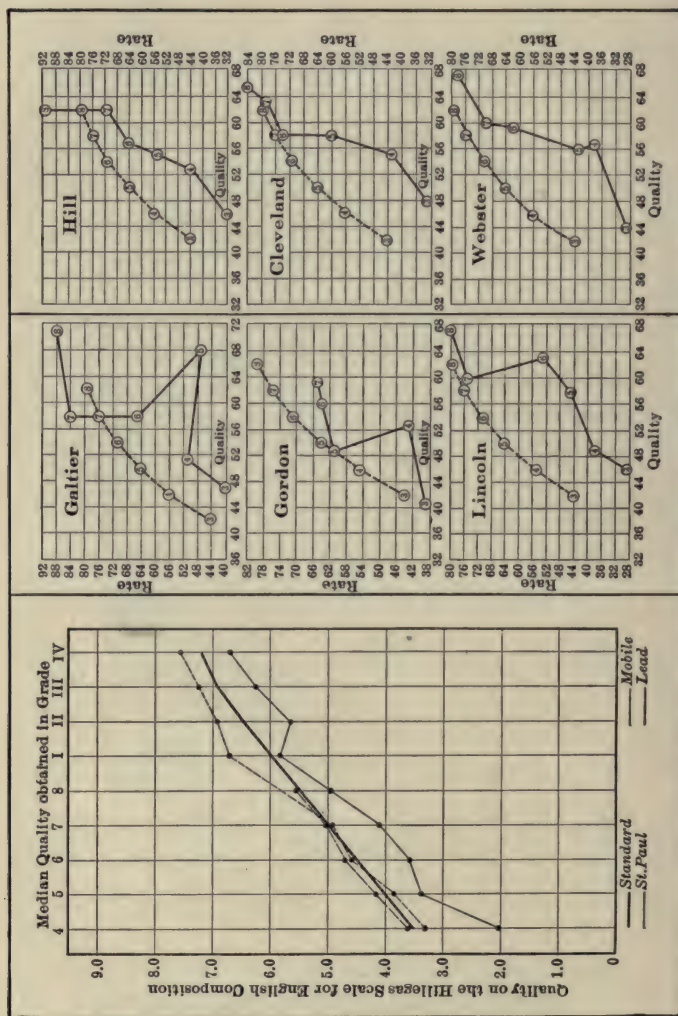
AGE-GRADE DISTRIBUTION TABLE.

facts scientifically, and to point them out clearly are the first steps in the process of remedying them. Retardation and elimination are among the most seri-



ACCELERATION AND RETARDATION GRAPHICALLY PRESENTED (the same data as in the accompanying age-grade distribution table).

ous defects of our school system. When educational science is able to remedy such defects it will have made no inconsiderable progress. The surveys are the beginning of that progress.



GRAPHIC PRESENTATION OF THE FINDINGS OF THE STANDARD TESTS.

III. Service System					280
A. Heating and Ventilation			70		
1. Kind	10				
2. Installation	10				
3. Air supply	15				
4. Fans and motors	10				
5. Distribution	10				
6. Temperature control	10				
7. Special provisions	5				
B. Fire Protection System			65		
1. Apparatus	10				
2. Fireproofness	15				
3. Escapes	20				
4. Electric wiring	5				
5. Fire doors and partitions . . .	10				
6. Exit lights and signs	5				
C. Cleaning System			20		
1. Kind	5				
2. Installation	5				
3. Efficiency	10				
D. Artificial Lighting System . . .			20		
1. Gas and electricity	5				
2. Outlets and adjustment	5				
3. Illumination	5				
4. Method and fixtures	5				
E. Electric Service System			15		
1. Clock	5				
2. Bell	5				
3. Telephone	5				

A Cutting from One Page of Strayer's Score Card for City School Buildings.

Pupils' Achievements. — Every school survey contains a section devoted to the measurement of the pupils' achievements in the school subjects. On the opposite page are several graphs from the St. Paul survey illustrating how the findings are presented to the public. They show that the St. Paul schools as a whole were below the standard in English composition,

and that in the Galtier school, for example, the seventh and eighth grades were above the standard in reading while the other grades were below.

The foregoing are a few samples of the types of studies being made in connection with school surveys. They give very little hint, however, of the scope of such studies, *i.e.* of the great range and variety of school problems that are being studied in similar fashion.¹

Standards. — But perhaps even more significant than the scope of the surveys is the fact that from them educational standards are gradually being derived. For example in the table on page 286, Buffalo or Newark would be taken as the median, *i.e.* the point above and below which the number is equal. About \$51 is the median cost per pupil-year for operation and maintenance. After enough cities have been similarly studied the median cost may be taken as the standard cost, by comparison with which all school systems can then be judged as high or low. In the same way standards are gradually being worked out for every phase of school administration mentioned in the survey outline above. These standards² enable any superin-

¹ If the student will take the trouble to make the above survey outline over into a list of questions the exercise will give him some idea of the scope of modern educational science.

² After having made the question list, if the student will remind himself that educational science is gradually formulating the answers that good schools ought to give to each and every one of his questions, he will get some notion of what standards mean, and what their value is.

tendent to keep his own survey posted up to date all the time. In other words, the surveys are producing objective standards by which superintendents can measure the quality of their own schools, instead of depending upon their own opinion, which is often whimsical. This means that school administration is becoming an exact science; which is a new departure in education!

Theories Underlying Curricular Changes. — The actual changes in the elementary curriculum have been traced. It remains to say a few words about the theory of those changes. From 1890 to 1910 Herbartianism dominated curricular theory (cf. pp. 263 ff.). As has been stated, it put history-literature material at the core of the curriculum, arranged it according to the culture-epochs theory, and correlated all other materials around that core. This theory actually exerted an immense influence upon practice, as any one can see for himself who will take the trouble to tabulate the history-literature material actually included in any elementary curriculum. The declining influence of Herbartianism between 1905 and 1915 was due largely to the increasing influence of psychology in general and child study in particular, which not only emphasized the necessity of adapting the curriculum to the interests of the child (as Rousseau advocated), but also showed increasingly what school exercises are so adapted and what are not. The changes that were listed above (p. 273) as Froebelian ✓

in spirit were largely due to the immediate influence of child study. It helped to create a sentiment in favor of a school program that would furnish self-activity to the pupils.

Educational Sociology. — More recently sociology is asserting itself as a guide for the curriculum maker. Beginning with Ward, sociologists have insisted that the elementary and secondary curriculums should be liberal; that is, that they should expose all children to all the various sorts of interests which civilization possesses, including science, literature, history, the arts, social relations, economic laws, moral ideals, and industrial skills. The popular demand for industrial training during the past ten years appealed to sociology for indorsement; but sociology has indorsed industrial education only on condition that it be accompanied by a liberal cultural education. Educators who paid sociology ignorant lip service have advocated adapting the curriculum to the findings of local industrial surveys, so as to prepare the children of a given community for the industries of that community; but true sociology is resisting early specialization, and is urging the necessity for universal secondary education of a liberal sort. What the contents of a liberal curriculum ought to be is a question that can be answered only by students of sociology, since this is an age of social problems which pupils must be prepared to solve. F. G. Bonser, of Columbia, and J. F. Bobbitt, of Chicago, are leaders in this type of work. Within the past

three or four years the social reasons for social participation (see p. 104) are being expounded by sociological philosophers, most conspicuous of whom is Smith of Kansas. It is also becoming increasingly evident that the aim of education is not merely individual but social welfare as well. In fact the philosophy of education is now being rewritten from the sociological point of view.

Popular Demands. — The curricular changes of the past thirty years have not been due so much, however, to the guidance of educational theorists as to the pressure of popular protest against the old curriculum, and popular demand for a new one. Hundreds of articles on the subject of education have appeared in the leading popular magazines during the past ten years. Any student who will take the trouble to assemble a list of titles of such articles will have his eyes opened to the real force that is molding the education of this democracy. Nevertheless popular demand, without the ballast of philosophy, would tend to sacrifice the broad humanistic aims of education to the immediately practical, *i.e.* to the narrow "bread-and-butter" aim. In the long run such an aim would defeat itself.

Teacher Training. — While there has been considerable growth in the facilities for teacher training in the past thirty years it is hardly adequate to the growth of school attendance and curriculums, nor to the growth of pedagogical science. The accompanying

table gives some idea of the greatly increased attendance of students in teacher-training courses.

STUDENTS IN TEACHER-TRAINING COURSES

	1900-1	1905-6	1910-11	1915-16
In colleges and universities	10,472	13,771	11,256	48,018
In normal schools . . .	63,402	68,937	84,095	111,772
In high schools	20,283	14,549	19,926	38,456

So far as normal schools are concerned there has been in the past fifteen years a tendency to make a two-year course for high-school graduates the standard course. The practice of offering short courses for eighth-grade graduates is decreasing. A few normal schools have developed four-year college courses. Emphasis has been placed increasingly on professional courses and the pedagogical study of the common branches, instead of mere academic reviews. The complexity of the modern educational situation is reflected, however, in the increasing variety of special courses, designed to train for special types of teaching; and with the rise of pedagogical science there has been an increasing variety in the practice of normal schools as to the amount and kind of professional material required. This variety indicates some uncertainty on the part of normal schools as to just what their task is. During the past three or four years several notable studies of the normal school

situation have been made, the most important of which is that by the Carnegie Foundation. The object of these studies is to formulate normal school standards.

The first college courses in education were offered only about thirty years ago (see p. 164). The number and variety of such courses have gradually increased. Between 1910 and 1915 there developed a marked tendency to reorganize teacher training in colleges and universities. In 1915¹ twenty-three institutions had "schools" or "colleges" of education, and twenty-four had "departments" of education. These colleges usually prepare for high-school teaching and administrative work, while the normal schools, excepting those having four-year curriculums, commonly confine themselves to the preparation of elementary teachers. In 1915 courses were being offered in history of education, philosophy of education, educational psychology, child study, special methods, and practice teaching. Courses in educational psychology, educational measurements, and school administration were beginning to appear. The largest growth in the last five years has been in the field of administration, which includes the scientific aspects of pedagogy just described (pp. 283-293) under standard tests and surveys.

The training of elementary teachers, especially for rural schools, has long been considered one of the functions of the high school. Recently the growth of teacher training in high schools and county normal

¹ Bolton, in "School and Society," Dec. 11, 1915.

schools has been rapid. In 1917 twenty-one states had recognized teacher-training departments in secondary schools. Wisconsin has county training schools entirely separate from other schools. Michigan, Minnesota, Missouri, Kansas, Nevada, and Ohio have county training work in special departments of the high schools. Thirteen states have training courses as part of the ordinary high school work. Several other states do similar work without special legal provision for it.

Teachers' Voluntary Associations. — Teachers' voluntary associations have performed an increasing service in recent years. The National Education Association has grown to large proportions, and since 1890 the winter meeting of the Department of Superintendence has been of increasing importance. The Herbart Society, — now known as the National Society for the Study of Education, — has been mentioned (p. 264). The Religious Education Association was organized in 1903. It holds annual conventions of increasing importance, and issues a bi-monthly magazine. The North Central Association of Colleges and Secondary Schools has figured largely in the adjustment of college-entrance requirements since it created a commission for that purpose in 1902. The number of associations listed in the Educational Directory of the Bureau of Education runs into the hundreds.

Pedagogical Literature. — Educational literature has been made over since 1890. "There is really not a

single textbook or handbook and indeed few reference books in education of any importance that were published prior to 1900. Very many of the educational journals have been established since then, and the character of almost every one has been profoundly revised." The following are some of the new magazines: *American School Board Journal*, 1891; *School Review*, 1892; *Primary Education*, 1892; *Pedagogical Seminary*, 1897; *Teachers College Record*, 1900; *Elementary School Journal*, 1900; *Journal of Educational Psychology*, 1910; *School and Society*, 1915; *Educational Administration and Supervision*, 1915; and *Journal of Educational Research*, 1920.

CHAPTER XI

THE PRESENT OUTLOOK

The Significance of the War. — The Great War marks an epoch: it is the pivotal event in the shift from the handicraft-monarchy to the machine-democracy régime. Its epochal significance will become more and more apparent as the centuries pass. Already it has had profound effects upon all institutions; upon education no less than any other. This is true of education not only in America, but the world over. The present outlook for the American public school can be understood only by understanding what the War has poured into the current of our history.

War-Time Activities in the Schools. — During the period of our active participation in the War the schools engaged in several kinds of special war-time activities. Definite provision was organized for the school children, as such, to take part in the great enterprises upon which the whole nation was concentrating its energies. They bought Thrift Stamps, they knitted sweaters and socks, they planted war gardens and canned fruits and vegetables, they collected material to fight poison gas, they gathered up books and magazines, they even

made four-minute speeches. The Junior Red Cross was organized to direct these activities; and is still continuing its work, though on a peace footing, with two chief aims: first, to train children for citizenship, and secondly, to enlist their sympathy and help for suffering childhood the world over. This war-time work was part of a great national propaganda, carried on by the government, to unite the nation in one great common purpose. It illustrated how the schools can be utilized to mold public opinion. It furnished a splendid demonstration in practice of the value of self-activity and social participation (cf. pp. 102 ff., 273 ff.) as pedagogical methods. It also illustrated how effective the school can be in moral education; for if the school can inculcate so successfully the ideals of patriotism, surely it can, if it tries, inculcate the ideals of the peace-time virtues as well.

School Attendance in War-Time. — The War, and the resultant demand for labor at high prices, affected the attendance at school; the tempting wages induced a good many older boys and girls to drop out of school. Attendance laws were laxly enforced. In Europe, conditions were much worse, of course; teachers were at the front, buildings were requisitioned for hospitals, coal was hard to get, food was scarce and both pupils and teachers were undernourished. Children of eleven and twelve years of age were released, and juvenile delinquency increased alarmingly. France warned us against neglecting our schools.

Lessons of the War. — The War taught us some important lessons about education. In some cases they were lessons that we already knew, though in a vague, ineffective way. The War retaught them, with an emphasis that will surely take effect. For the next thirty years a chief responsibility of educators and teachers will be to put these lessons into practice.

The Schools Make the Nation. — Perhaps the most fundamental of all was the new illustration of the old principle that a nation is what its schools make it; or, in other words, that whatever group or doctrine gains control of the schools can in a generation or two mold the nation at will. The schools of Germany had been controlled by the imperial party ever since 1848. The subject matter of the curriculum had been selected with a view to inculcating the imperialistic ambitions. History in particular had been taught in such a way as to set up as models the ancient militaristic empires, Assyria and Rome. The discipline of the German schools had served to render every citizen immediately responsive to authority. The German efficiency was traceable in large part to the rigorous thoroughness of pedagogical method. As for France, her magnificent resistance amazed us. Then came the assurance that the French soldiers' loyalty and devotion had been inculcated by the French schools; and we began to inquire what their methods of moral instruction had been. In England H. G. Wells raised the question as to what the schools had

been doing for a generation, that such a crisis could have come so unexpectedly (cf. p. 262); and intimated that the schools might have done very much better work in preparing the masses for their responsibilities of both war and peace. The reforms of 1918 indicated that English public opinion shared his point of view. Russia became the outstanding illustration of what calamities can come upon a great people as a penalty for illiteracy. As a result there is evident throughout the world a new insight as to the function of education and a new resolution to build new school systems adequate to the new demands of a new age.

The Extent of Physical Defects. — In the first selective draft three quarters of a million young men, or nearly one third of those actually examined, were rejected on account of physical defects. Many of these defects were such as could have been remedied had they been treated in time. These appalling figures set the nation thinking: clearly, such defects are serious handicaps to the pursuits of peace as well as war. Their early treatment would greatly increase the efficiency and happiness of our people. The result of this discovery was to give a new impetus to school hygiene, medical inspection, school clinics, and physical education.

Illiteracy. — Another disquieting revelation was the high percentage of illiteracy that still exists among us. The first selective draft showed that there were in this country 386,000 males between the ages of twenty-one

and thirty-one who could not read an American newspaper nor write a letter. From these findings it was inferred that there must be approximately 18,000,000 people in the country who are unable to read the English language. The census of 1910 had reported 8,608,432 illiterates. For a democracy to send overseas thousands of totally illiterate young men to fight for democracy was a startling revelation of the inconsistency of democracy. We began to suspect that we had been deceiving ourselves about free public universal education, and to realize that we have only the beginnings of a really effective educational system. Dr. F. E. Spaulding startled the nation with the declaration that on the average we are a nation of barely sixth graders! And so the findings of the draft have taught us that we must make our schools in reality what they have been only in our imaginations. The fact that our illiterates are not all foreigners and negroes, but that a surprisingly large proportion of them are native whites from the rural districts, served to emphasize the rural problem.

The Need for Americanization.—Another revelation of the War was the un-American character of our population. Large numbers of our soldiers were so ignorant of our language that they could not understand orders. Neighborhoods of enemy-sympathizers were alarmingly numerous. Our whole society was honeycombed with spies, mostly of foreign origin. The most radical agitators against our institutions

were found to be immigrants and aliens. We learned that the need for Americanization was desperate.

One thing that came to light in the war-time struggle against pro-German disloyalty at home was the fact that there is a very large number of private or parochial schools where instruction is carried on in a foreign language. The crisis clearly revealed the dangerous possibilities of such un-American institutions. This revelation raised the whole question of private schools. State laws have permitted attendance at such schools as a substitute for the required attendance at regular public schools, but without the legal regulations and the supervision necessary to enforce the standards and objectives of the public schools. To enforce such standards and objectives is the next logical step in the process of secularizing education which has been going on for nearly a century (cf. p. 140); and the necessity for it is now very evident.

Vocational Education. — The relative scarcity of men with technical training to meet the demands of war has given a considerable impetus to vocational and technical education (cf. p. 248). Educational work for the rehabilitation of disabled soldiers has suggested the utility of this particular service for the victims of industrial accidents.

Applying the Mental Measurements. — The success of the mental tests in selecting men of special ability for special service has demonstrated the utility of such measurements in both education and industry.

In fact, as this book goes to press (1920) one of the outstanding interests of the hour is the problem of individualizing teaching by the aid of mental and educational measurements. Numerous instructional devices are being invented whereby a pupil can advance through the elementary grades at a rate determined by his own ability, interest, and diligence. In fact, the rigid grading system, that has been adhered to for half a century (cf. p. 157), and applied even where it is least applicable (*e.g.* in rural schools and Sunday schools), seems on the point of being superseded, just as the monitorial system was, nearly a century ago (cf. p. 57), and for practically the same reasons. There is some indication that mental tests may come into general use in determining fitness for college entrance. They promise to be useful also in vocational guidance.

Education as a Cure for the Social Unrest. — There is another lesson that we have learned from the display of radicalism since the Armistice and the wave of reactionary repression with which it was met. Radicalism is a symptom of social and industrial injustices; they breed it just as marshes breed malaria. The way to kill radicalism is to correct the injustices, just as the way to stamp out malaria is to drain and oil the marshes where the mosquitoes breed. The public schools can do two things that will help this situation. They can, in the first place, teach economics and sociology systematically, so as to enlighten the public

regarding our social problems (cf. pp. 186 ff.). The need for this change in the curriculum is rapidly gaining recognition. Numerous agencies are advocating it. A committee of the N. E. A. recommends Social Science (including history) as a required subject throughout every year of both the junior and senior high schools, to be preceded by citizenship instruction in the elementary grades. In the second place, the school might do more to equip the masses for the struggle of life. There is a growing conviction that vocational education ought to be universal, and it is being vigorously promoted under the Smith-Hughes Law (cf. p. 245). There is also a growing recognition of the fact that general intelligence is quite as important as special training. Accordingly, high schools and colleges are being increasingly patronized by the people; and continuation schools are being advocated (p. 144) for those who are compelled, under present conditions, to leave school early. It should be recognized even more clearly than it is that such measures are necessary to cure the social unrest.

Two or three other important educational needs came to the focus of public attention during the summer of 1918, though not quite so directly as a result of the War as those already mentioned.

The Plight of the Rural School. — One of these is the problem of rural education. The success of democracy depends upon the education of the masses; but 60% of the masses get their education in the

schools of the open country and the small villages. The city depends upon the country: the cities cannot thrive if country life is not sound. Hence, it follows that "if the rural schools fail, rural civilization will fail; if rural civilization fails, American civilization will fail." In the face of this necessity the plight of the rural schools is as follows:¹

1. The average school year is more than two months shorter than in the city.

2. For every one dollar the city child has invested in his teacher, the rural child has only fifty-five cents.

3. The typical country school teacher is an eighteen-year-old girl, with a tenth grade education, who stays but one year in a place, and whose only supervision is one or two visits annually from a country superintendent with little or no professional training.

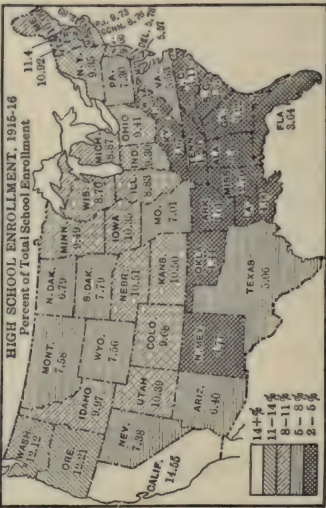
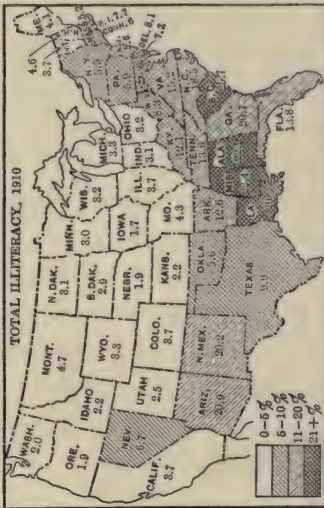
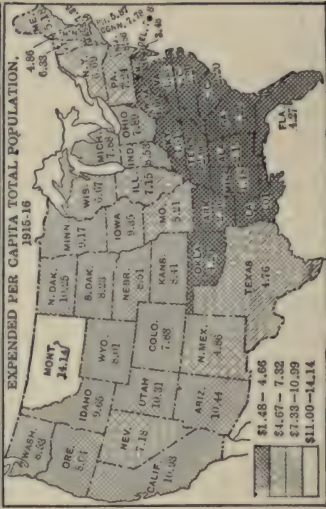
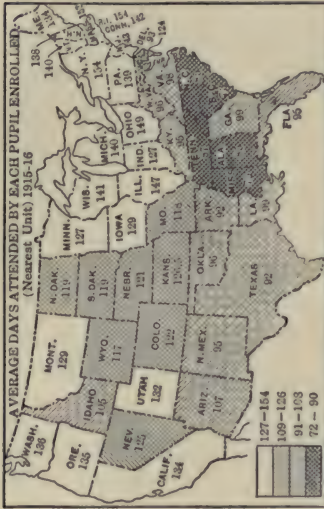
4. Most rural schools (80% of them) are held in poorly furnished, one-room buildings, where recitations are but ten or fifteen minutes in length, and only meager elementary instruction is given, with nature study, manual training, home economics, and even agriculture omitted.

The results are that the proportion of native-born illiteracy is six times as high in rural as in urban territory, and that a very small percentage, indeed, of rural children ever graduate from high school. Further results are that the farmers seem incapable

¹ N. E. A. Bulletin, Commission Series, Number Four, 1918.

of producing their own leaders for their own great political movements, that the percentage of rural tenancy keeps steadily increasing, and that the country population is constantly being sifted, those most capable of developing into leaders drifting regularly to the cities. The remedy for these conditions is to build up in the country districts a school system as good as we have in the towns and cities. This must, of course, include high schools — any fraction of the population which is left without high schools is thereby condemned to a servile status. Hence, the necessity for consolidation. We have been discussing this problem of rural education for fifty years (see p. 180); the time has come when it must be solved.

The solution of this problem will be reached, it is agreed, through increased federal aid to schools. "The U. S. Census also shows that the most rural group of states has the largest percentage of illiteracy and that per capita wealth is in direct proportion to the percentage of intelligence or literacy. But the per capita cost of education for the rural population is greater than that of education for the urban population. The states and sections of this nation, therefore, in which the need and the cost of education are greatest have the least wealth with which to provide it. Accordingly, no equalization of educational opportunity for all the children of the nation is possible without the aid of the whole nation through Federal appropriation distributed to each part of the nation



HOW THE SOUTH IS HANDICAPPED BY HER RELATIVELY MORE DIFFICULT PROBLEMS.

according to the needs of each.”¹ This is a principle toward which our educational experience has been pointing for a long while (cf. pp. 136, 177 ff., 213).

The Special Needs of the South. — The urgency of federal aid is inferred from the handicaps and special needs of the South, as indicated by the accompanying maps. The causes for these conditions are historical (cf. pp. 124, 151, 180). It should be understood in all other parts of the country that the South is making heroic and highly intelligent efforts to help herself. Some of the most constructive educational programs to be found anywhere are now being worked out by southern states. But the South needs and deserves the help of the whole nation.

The Shortage of Teachers. — The most alarming educational crisis precipitated by the War is the shortage of teachers. It was pointed out in an N. E. A. bulletin² in 1918 that out of the approximately 600,000 teachers in the United States one half (*a*) have had no more than a high school education, (*b*) have had no professional training, (*c*) are less than twenty-six years of age, and (*d*) serve in the schools only four or five years. One sixth of these 600,000 teachers (*a*) have had less than a tenth grade education, (*b*) are less than twenty years old, and (*c*) serve two years or less. Fully one half of the next generation of American voters are being taught by teachers of meager general education and no special training. Normal schools,

¹ Commission Series, Number Four.

² *Ibid.*, Number Three.

the bulletin asserted, are penuriously supported, understaffed, and insufficiently patronized. Due to rise in prices which practically doubled the cost of living between 1914 and 1920, and to the attractive wages offered in other occupations, and to the demand for trained workers in other fields of social service, desertions from the ranks of teaching have been enormous. It was officially stated ¹ during 1920 that there had been a loss of students in the state normal schools amounting to 25 per cent and in some states 50 per cent; that there were 18,279 schools closed because of lack of teachers, and 41,900 schools taught by teachers characterized as "below standard but taken on temporarily"; that at least 15,000 teaching positions in public high schools would be without properly qualified teachers in September, 1920; and that those upon whom reliance for leadership might be placed were being drawn away from supervisory and administrative positions. It might have been added that on account of the reduced purchasing power of their salaries, thousands of those remaining are being subjected to strain and anxiety, that cannot but decrease their efficiency, lower the professional morale, and discourage promising candidates for the profession. Thus, at the precise time when a very great educational advance is most urgently needed, a shortage of qualified teachers is doubling the difficulty. The underlying cause, of course, is that the purchasing power of the

¹ See "School Life," February 15, July 1.

dollar has been reduced to half. It should be added, however, that the public has already (1920) reacted to the situation by granting a sharp increase in salaries, but with least promptness in the case of the best trained educators.

Shall Teachers Unionize? — The high cost of living has stimulated a movement to unionize teachers under the American Federation of Labor. The claim is that the union gets results where otherwise a deaf ear is turned toward teachers' pleas for better salaries. But the leaders of the profession are almost unanimously opposed to it. They contend that teachers have the very unique social function of creating a safe public opinion by distributing impartially to all a knowledge of the unbiased truth; and that if they were to take sides on the labor-capital controversy, they could no longer perform that function successfully. The leaders further urge that in the long run teachers can safely put their trust in a professional attitude toward their work and in an appeal to public opinion. To further professional solidarity the National Education Association was in 1920 reorganized on a representative plan, based on state and local units.

The Program of the N. E. A. Commission. — After this survey of the present emergency in education, the task of the next generation of teachers must be obvious. The present leaders have already made a vigorous attack upon the problem. During the summer of 1918 a commission of the National Education Associa-

tion, composed of twenty-nine leading educators, formulated a "program for education." This program was drafted into the Smith-Towner bill now pending before Congress. This bill, though it may never be enacted into law in its present form, will be of historic significance as indicating the forward movement to which the educators of this period are trying to rally the public.

The chief provisions of the bill are :

- I. To create a federal department of education with a Secretary in the President's Cabinet.

This provision aims to give the same recognition to education as is now given to agriculture, labor, etc.

- II. To appropriate \$100,000,000 annually, to be distributed as follows :

1. To remove illiteracy, three fortieths, or \$7,500,000.
2. To Americanize the foreigners, three fortieths, or \$7,500,000.
3. To promote physical and health education and recreation, two tenths, or \$20,000,000.
4. To equalize educational opportunities of public schools of less than college grade, particularly rural schools, five tenths, or \$50,000,000.
5. To extend and improve facilities for preparation of teachers in public schools, particularly rural schools, three twentieths, or \$15,000,000.

The reasons for each of these items must be clear from the foregoing pages; and the relative importance of each is indicated by the size of the various proposed appropriations.

Education Abroad. — Abroad there are indications of a great educational awakening, the most significant single feature of which is the extension of secondary education. There appears to be a universal recognition of the fact that the mere elementary education of the masses is entirely inadequate to the needs of the new democracy. These new educational reforms "represent a genuine attempt to realize the ideal for which the War has been fought."

England. — In England the Fisher Act was passed in August, 1918. It extends compulsory education to the age of fourteen (or, by local option, to sixteen), provides for medical inspection and treatment to eighteen, establishes "nursery schools" for children from two to six, enacts compulsory continuation school attendance to eighteen, provides financial aid to poor but able pupils, concentrates supervision of child labor, recreation, and health in the hands of school authorities, and improves arrangements for governmental support and administration of all schools. This act represents a great popular movement promoted by educational statesmen and vigorously supported by British labor. It is best understood as a culmination of the acts of 1870 and 1902 (cf. pp. 184, 223). By enacting such a law as this while

engaged in a desperate struggle for national existence, Great Britain aroused the amazement and admiration of the world, and set an example from which we in America may well take a lesson. In the past England has been tardy in her educational development; the Act of 1918 bids fair to put her in the lead.

France. — In France¹ educational progress has taken the form of agitation and the development of public opinion. Legal action and official decrees have been fragmentary. On the whole, France appears to be moving toward objectives quite similar to those of the Fisher Act in England. There is a clear demand that secondary education be extended (especially to girls) and that its content be made more democratic and practical.

Germany. — In Germany¹ the outstanding educational reform is the widespread demand for the *Einheitschule*. This would mean a uniform compulsory system of education for all children between the ages of six and twelve, the abolition of the private *Vorschule*, the postponement of secondary education until twelve or later, and the opening of secondary opportunities to all classes of society alike. It will be seen by comparison with the old system (cf. pp. 61, 224) that the new *Einheitschule* signifies the complete breakdown of the caste-system education in Germany. The War has made the German schools safe for democracy.

¹ See U. S. Bureau of Education, Bulletin No. 21, 1919.

Russia. — From the meager reports that came out of Russia during the first half of 1920 it appears that the Bolsheviki are undertaking to carry out the most ambitious educational reforms. A Commissariat of Education was created in 1918, and the plan of the new Commissary involves a uniform industrial school in which all children of the Soviet Republic are to receive compulsory education between the ages of eight and eighteen. The schools are to be of two grades, the first for pupils from eight to thirteen, the second for pupils from thirteen to seventeen. There is to be a kindergarten for younger children. All private schools are said to have been taken over by the state. The children of rich and poor are to be treated quite alike, and the government is to furnish food, clothing, and shelter when necessary. Schools are for both sexes together, there is to be one teacher for every twenty-five pupils, and advancement to the higher schools is to be on the basis solely of ability. Subject matter and methods are to be radically revolutionized. The central aim is to instill practical familiarity with productive industry. The curriculum is to be organized around industry, and the methods based upon interest and voluntary self-direction.

The reports also indicated that a great drive had been going on against illiteracy. The literate portion of the population was mobilized to teach the illiterate. Part-time schools were organized. Penalties were imposed for failing to acquire the ability to read and

write. Illiteracy was said to have been reduced from 30% to 8% in Petrograd, and in the Bolshevist army from 85% to 40%. The People's Commissary predicted that in three years illiteracy would be wiped out in Russia, where before the Revolution there are said to have been 100,000,000 illiterates.

It will be interesting to watch Russia as the years go by to see how much of this amazing program she can succeed in putting into actual practice.

These four countries have been selected for description here because they are the countries in which we are most interested. But the reforms there are not exceptional, they are typical of similar movements almost everywhere. Which fact suggests that unless we actually achieve the reforms being advocated here we shall fall behind the rest of the world.

A Glance into the Future. — One function of history is to show us what we ought to favor and what we ought to oppose. Having traced the growth of our chief educational movements, the student is now in a position to see what they give promise of growing into, and what they may be expected to do for our democracy. It may now be worth while to look into the future and attempt a forecast of the school system that America will need a generation or two hence. From the foregoing pages it must be clear that the schools are built to meet the needs of the civilization they minister to, and to create the civilization of the future. What then is the future civilization that

America is now in the process of building, and what kind of schools will be necessary to create and maintain that civilization?

The New Super-Civilization. — Few persons have been taught history in such a way as to give them a bird's-eye view of the race's past back into remote prehistoric times. Without such a bird's-eye view of social evolution one is unlikely to read the prophecy that lies in current events. But with such a prospective the prophecy is plain enough: we are passing through the greatest change in history. We are just in the process of entering a super-civilization as much superior to the civilization of the past forty centuries as that civilization was superior to the savagery of prehistoric tribes. It was the domestication of plants and animals, together with the invention of monarchy and slavery which that domestication caused, which lifted mankind from savagery to civilization. Recently, the race has domesticated, so to speak, steam, electricity, bacteria, and chemical affinities, and invented democracy and liberty. These will lift the race to a super-civilization. In fact, that is what is happening: the war and the social unrest are the birth-pains of a new social order.

When the new super-civilization fully arrives we shall have such a mastery over nature (through natural science) as to supply our needs abundantly and protect ourselves from disease; we shall have such a mastery over social forces (through social science) that we shall be able to abolish war, and to pass

prosperity, leisure, and the means of happiness around quite fairly to everybody; we shall (through the use of art in its various forms) have such resources for wholesome recreation that the vices will largely lose their temptation; and we shall (through morality and religion) acquire sufficient control over our own passions so as to escape much of the pain we now suffer. These the new super-civilization will achieve, just as civilization (contrasted with savagery) achieved protection from wild animals and the climate, a dependable supply of food and clothing, and the means of accumulating wealth and culture. But whether the new order will come promptly and peacefully, or after long struggle and delay, we cannot tell. It will all depend upon how rapidly the whole mass of people master natural and social science, acquire culture, and develop high character. In other words, it depends upon whether we succeed in building promptly the new schools of the new age.

The New Schools of the New Age: Curriculum. — What kind of schools will the new age require to insure its prompt success? They will have to look after the health of the children from birth to maturity, and teach them how to take care of their own health thereafter. This is the prophecy of medical inspection and health instruction. They will have to prepare young people for some useful work in the world: this is what vocational education and guidance are pointing toward. They will have to train girls to

be good home-keepers — for without good homes there can be no good society: domestic science is only the beginning of this. They will have to provide young people and old with wholesome tastes in recreation: this will grow out of the wider use of the school plant, the boy scout movement, and other like tendencies. The schools of the new social order will have to provide substance for the higher life: hence we should encourage what fortunate beginnings we already have in art instruction, public school music, literature, and other cultural studies. They will — in coöperation with the church — have to solve the unsolved problem of moral education; it is of fundamental importance. And above all, perhaps, they will have to teach the people what the correct solutions are for such social problems as taxation, immigration, monopoly, the capital-labor controversy, and many others; for until these are solved, there can be no super-civilization, but only chaos and struggle.

Universal High School Graduation. — If the reader sees the necessity for such a curriculum as this, he will realize the importance of higher schools. Elementary schools can do little more than furnish the necessary preparation for the real education that is necessary. The growth of high schools in this country during the last fifty years, and the new movement abroad, indicate an instinctive discernment of their function in the new era. Nothing short of universal secondary education will serve the needs of the new democracy;

and even that must be supplemented by open opportunity to the higher learning. If our high schools make only the same rate of growth in the next fifty years that they have made in the past fifty, they will barely keep up to the needs of society.

The New Technique. — The new school requires a new method. The old subjects have to be taught in a new way in order to make room for the new subjects. For the new subjects a new method has to be worked out. For the new type of high school there are almost no precedents, especially because it must cater to the diverse capacities and varied needs of all sorts of children. Furthermore, to spend more money on school expansion would only be to waste much of it unless it were administered efficiently. Hence, the absolute necessity for a new technique. This indicates the use we shall have for the new science of education that the last two decades have begun: the new schools of the future would be impossible without it.

The Reason for Federal Aid. — Universal is the magic word! In monarchies of the old régime majorities were kept in step through compulsion by the few. Now the majorities rule: they must have intelligence and character. Ignorant and vicious minorities even are dangerous to democracies, extremely dangerous, unless they are negligibly small. The existence of any considerable class of ignorant, degraded citizens threatens the very life of democracy. This

is the warning of I. W. W.-ism and pro-Germanism: it is the menace of illiteracy. Unless all share in the education outlined above, we shall never be able to pull together on any program of progress; instead, our population will be made up of numerous discordant groups, each pulling in the direction of his own particular hobby or interest. That, of course, would mean the long delay of the new and better world for which this age so anxiously waits.

This explains the necessity for federal support and supervision of education. This principle has been developing for more than half a century (cf. pp. 177 ff.); the next half century must carry it very much farther indeed. The handicapped sections, including the South and the rural regions, should have just as good schools as Cleveland or Minneapolis. It is for this social reason also that we must apply the principle of aid to promising poor children very much farther than we have done as yet. Free tuition and in some states free books we have already achieved. Just what further aid should be furnished it may not now be safe to predict; but poverty should cease to be an acceptable excuse for letting children drop out of school before finishing the twelfth grade, nor should any capable youth be deprived of higher learning because his parents are poor.

New Professional Standards. — Such a system of education is neither a winter job for a farm hand (cf. p. 11) nor a temporary source of pin-money for a high

school girl while she waits to get married. It is a learned profession! The rank and file of teachers must have both liberal education and extended technical training; the commissioned officers must be leaders in the intellectual and moral life of the age and masters of the new educational science. And there must be developed a professional ethics and *esprit-de-corps* without which no profession can be a real profession. Such a profession must enjoy social prestige and material reward, otherwise it will not attract suitable men and women. And besides all this the mere growth of schools will call for very many more teachers than we are employing now. With these considerations in mind the reader will understand how very serious indeed the present crisis in the teacher supply really is.

The Noble Calling of the Teacher. — With this glance into the future the reader will feel how really providential has been the growth our schools have made in the past, and how reverently grateful the true teacher ought to be for the privilege of being a “laborer together with God” in the building of a new world.

INDEX

- Academies, 59, 130, 152, 184.
- Achievements of pupils. See standard tests.
- Administration. See county administration, federal aid, state administration, state aid, superintendent city, etc.
- "Adolescence," Hall's, 276.
- Age-grade distribution, 284, 287 ff. See elimination, retardation.
- Agricultural colleges, 131, 162, 200. See experimental stations, Hatch Act, land grants, and Morrill Act.
- Agricultural education, 107, 162, 185, 196, 245, 252, 254, 287-288. See Boy Scouts, clubs, county agents, Morrill Act, Smith-Lever Act.
- Aim of education, 86, 266, 269, 295.
- Alcohol. See temperance.
- Alcott, A. Bronson, 125.
- Alcott, Louisa M., 125.
- Algebra, 230, 231. See mathematics.
- American Federation of Labor, 147, 187, 313.
- Americanization, 144, 215, 217, 248, 304, 314.
- American Journal of Education*, 176.
- American Missionary Association, 181.
- American School Board Journal*, 299.
- Analytical method, 70, 81, 267.
- Angell, J. R., 79.
- Apperception, 93.
- Appreciation, 241, 242, 256, 280, 281.
- Apprenticeship, 17, 243, 245.
- Architecture, school. See school architecture.
- Aristocratic education, 2, 3, 20, 47, 61 ff., 108, 223, 316, 322.
- Arithmetic, 16, 50, 51, 68, 126, 153, 173, 230, 265, 267, 279.
- Arithmetic, Colburn's, 51, 126.
- Arithmetic, Pike's, 50.
- Arithmetic, "Ray's Third Part," 136, 230.
- Army schools, 247 ff.
- Art, 161, 170, 219, 240, 261, 267, 287, 288, 321.
- Associations, educational. See voluntary educational associations.
- Athletics, 251, 255. See physical education, play, recreation, etc.
- Ayres, Leonard P., 279, 285.
- Bache, A. D., 127.
- "Bachelor argument," 138.
- Barnard, Henry, 124, 126, 129, 176, 177, 178.
- Baroness von Bülow, 98, 107, 171.
- Barrows, Thos. G., 124.
- Basedow, 32.
- Berkeley, Gov., 3.
- Berlin, University of, 172.
- Bible, 150, 256.
- Binet, 277.
- Blankenburg, 88, 97 ff.
- Blow, Susan E., 172.
- "Blue-backed Speller," 50.
- Board of education, 210.
- Board of Education, State, 178, 211. See Massachusetts.
- "Board" schools, 184, 223. See "voluntary" schools.
- Bobbitt, J. F., 234, 235, 285, 294.
- Bodemer, 65.
- Bolton, F. E., 297.
- Bonser, F. G., 294.
- Bookkeeping, 154, 157. See commercial.
- Boone, R. G., 49, 58, 163.

- Boston, 4, 7, 120, 125, 128, 286.
 Boston Survey, 286.
 Boy Scouts, 252 ff., 321.
 Bryn Mawr, 182.
 Bülow. See Baroness, etc.
 Bureau of Education, 177, 178, 298, 316.
 Burgdorf, 69, 76, 86.
 Business colleges, 157. See commercial.
 "Busy work," 107, 274. See construction work.
 Butler, Pres. N. M., 207.
 Capital and labor. See labor and capital.
 Carnegie, Andrew, 218.
 Carnegie Foundation, 297.
 Carter, James G., 117.
 Catechism, 50.
 Catholic Church, 45, 141.
 Centralization, 142, 143, 144, 177, 185, 208.
 Certification of teachers, 129, 165.
 Chautauqua movement, 183, 218.
 Chicago, 286.
 Chicago Normal, 174.
 Chicago University. See University of Chicago.
 Child study, 265, 267, 276, 280, 293, 297.
 China, 189, 224.
 Cincinnati plan, 203.
 Citizenship, education for, 38 ff., 139, 142, 143, 152, 156, 160, 162, 239, 270, 271-273, 301, 307. See Boy Scouts, civics, community civics, democratic education, democracy, industrial progress, social progress, social studies.
 City administration, 179. See administration.
 City superintendency. See superintendent, city.
 Civics, 155, 239. See citizenship.
 Civil War, 29, 60, 124, 132, 153, 156, 164, 172, 175, 182, 187, 189, 232.
 Clark University, 200, 276.
 Classics, the, 21, 28, 58, 60, 61. See Latin.
 Classroom management, 279. See Page's "Theory etc.," White, E. E.
 Clay modeling, 107, 267, 274.
 Clergymen, education of, 220.
 Cleveland, 286.
 Cleveland Survey, 283.
 Clinics, school. See school clinics.
 Clubs, boys' and girls', 245, 252.
 Coeducation. See education of women.
 Coffman, L. D., 285.
 Colburn's Arithmetic. See arithmetic.
 College curriculum. See colleges.
 College entrance, 277.
 Colleges, 20, 39, 58, 130, 162, 199, 201, 251, 260, 261, 276. See agricultural colleges.
 Colleges of education, 165, 297.
 Colleges, women's. See education of women.
 Colonial court, 17.
 Colonial schools, 1-21.
 Columbia University, 20, 200, 236, 268.
 Commercial subjects, 157, 217, 260, 287, 288.
 Commission, N. E. A., 208, 311, 313.
 Commissioner of Education, U. S., 169, 178, 192, 222.
 Committee-men, 52.
 Committee of Fifteen, 207, 265.
 Committee of Ten, 236, 237, 259.
 Common branches. See the particular subjects.
 Common people, education of, 20, 24, 38, 61, 62.
 Common School Revival. See Great Educational Awakening.
 Community center, 136, 195, 251, 254 ff., 273. See wider use, etc.
 Community civics, 239.
 Community music, 242.
 Composition, 279. See language.
 Compulsory attendance, 61, 121, 179, 183, 273, 305, 317.
 Connecticut, 5, 7, 56, 123, 178.
 Consolidation, 19, 136, 196, 208.
 Construction work, 240, 265, 267, 274. See "busy work."

- Contagious diseases, 257.
 Continuation schools, 144, 224, 307, 315.
 Cook, John W., 263.
 Corporal punishment, 18, 26, 88.
 Corporation schools, 246.
 Correlation, 90, 265, 293.
 Correspondence, 216.
 Costs, 57, 178, 191, 192, 194, 285, 286, 287, 288, 308.
 County administration, 19, 129, 141, 179. See county unit.
 County agents, 245.
 County superintendency, 129, 130, 141, 210.
 County unit, 179, 210, 211, 213.
 Course of study. See curriculum.
 Court, colonial. See colonial court.
 Courtis, S. A., 279.
 Cubberley, E. P., 56, 137, 180, 210, 285.
 Cultural education. See recreation, literature, music, art.
 Culture epochs theory, 90, 91, 265, 293.
 Curriculum, 12, 55 ff., 58, 61, 62, 87, 88 ff., 135, 153, 160-162, 185, 195, 201, 202, 205, 207, 226-262, 265, 266, 267, 277, 281, 284, 293, 294, 302, 307, 320. See extra-curricular activities.
 Curriculum, elementary, 157.
 Curriculum, high school. See high school curriculum.
 Dame schools, 8-12, 57, 132.
 Dancing, 107, 255.
 Darwin, 89.
 Defective children, 277.
 De Garmo, Charles, 263.
 Democracy, 37, 38, 41, 49, 60, 113, 139, 140, 142, 143, 185, 208, 214, 262, 272, 300, 302, 303, 307, 309, 318, 322. See industrial progress, social progress.
 Democratic education, 2, 38 ff., 46, 62, 108, 139, 140, 142, 143, 144, 185, 190, 195, 202, 208, 215, 223, 250, 258, 261, 270, 273, 294, 302, 303, 313, 315, 316, 317, 321. See common people, citizenship, poor education of, democracy.
 Denmark, 183.
 Department of Education, Federal, 178, 215, 314.
 Department of Superintendence, N. E. A., 298.
 Dewey, John, 33, 36, 107, 190, 240, 268-273.
 Dexter, F. B., 59.
 Diagnosis. See medical inspection, mental measurements, standard tests.
 Differences, individual. See individual differences.
 Disciplinary theory, 21, 26, 28, 259, 281 ff.
 Discipline, 18, 26-28, 70, 73, 87, 122, 132, 185, 271, 280. See corporal punishment.
 District school, the, 18 ff., 42, 48, 127, 133 ff.
 District system, 42, 48, 121, 137, 142, 143, 177, 179, 185, 309. See district school.
 Dock, Christopher, 6.
 Domestic art, 241.
 Domestic science, 107, 243, 244, 260, 287, 288, 320.
 Draft, the selective, 303.
 Dramatics, 251, 273.
 Dramatization, 107, 209, 255, 274.
 Drawing, 107, 240, 255, 260, 274.
 Drill, 173, 280.
 Dwight, Edmund, 117, 119.
 Economics, 185, 188, 306. See social studies.
 "Education of Man," 97, 101.
Educational Administration and Supervision, 287, 299.
 Educational Associations. See voluntary educational associations.
 Educational diagnosis. See standard tests.
 Educational fads. See fads.
 Educational periodicals. See periodicals educational.
 Educational progress, 191. See progress, industrial progress, social progress.
 Educational psychology, 297. See mental measurements, psychology.

- Educational research, 71, 287, 297.
See science of education.
- Educational Review*, 176.
- Educational science, 165, 166, 264.
See science of education.
- Educational sociology, 166, 190, 283, 294.
- Educational statistics, 191.
- Educational survey, 283-293.
- Edwards, Vivian W., 124.
- Electives, 161, 260.
- Elementary curriculum, 227 ff. See the various subjects.
- Elementary education, 20, 43, 61, 62, 155, 160-162.
- Elementary School Journal*, 299.
- Elimination, 197, 279, 284.
- Eliot, President Chas. W., 161, 207, 227.
- Émile, 23, 29 ff., 36.
- Endowments, 60.
- Engineering, 164, 200, 221.
- English education, 6, 9, 25, 44, 54, 62, 77, 82, 126, 127, 145, 184, 223, 303, 315. See analytical method, "board" schools, "voluntary" schools.
- Enriching the curriculum, 155.
- Enrollment, 191, 198, 284, 301.
- Entrance, college, 201.
- Equipment, 195, 248, 284, 308.
- Ethics, professional, 324.
- Etiquette, 24, 26, 27.
- European education. See English education, foreign education, etc., etc.
- Evening schools. See night schools.
- Evolution, 91.
- Examinations, 278.
- Experimentation, educational, 70, 71.
- Experiment stations, 163.
- Extension, educational, 182, 215 ff.
- Extra-curricular activities, 250 ff., 273.
- Fads, educational, 32, 56, 158, 170, 171, 174, 227, 264, 267, 274.
- Family, education in the, 3.
- Federal administration, 19, 178, 314.
See Bureau of Education, Commissioner of Education, federal aid, land grants.
- Federal aid, 132, 144, 171, 212, 214, 245, 252, 258, 309, 314, 322, 323.
See federal administration.
- Federal Department of Education.
See Department of Education.
- Fellenberg, 72, 181.
- Fichte, 64, 69, 82, 86, 95.
- Field schools, 47.
- Finances. See costs.
- Fisher Bill, 315.
- "Fitting" schools, 60.
- Flexner's "Modern School," 261.
- Folk dancing, 274. See dancing.
- Foreign education, 2, 18, 54 ff., 61 ff., 43, 144, 183, 222 ff., 315 ff.
- Formal discipline. See disciplinary theory.
- Formal English. See language.
- Formal steps, 92, 264.
- France, 22 f., 62, 145, 183, 224, 301, 302, 316.
- Franklin, Benjamin, 39, 59.
- Freedmen's Aid Society, 181.
- Freedmen's Bureau, 181.
- Free schools, 41, 49, 61, 184, 185.
- Free School Society, 44, 56, 141.
- Free textbooks, 139, 323.
- Froebel, 33, 64, 69, 84, 94-108, 175, 268, 269.
- Froebelianism, 157, 171-175, 251, 267-275, 280, 293.
- Furniture, 133, 195. See equipment.
- Gallaudet, Rev. F. H., 117.
- Galloway, Samuel, 124.
- Garfield, James A., 178.
- Gary schools, 204 ff.
- Gary Survey, 283.
- "General method," 263, 281.
- Geography, 50, 68, 90, 121, 173, 232 ff., 239, 265. See Morse's Geography.
- Geometry, 230, 231. See mathematics.
- German education, 82, 120, 126, 128, 131, 183, 200, 222, 224.
- Germans, 4.
- German universities. See universities, German.
- Germany, 32, 62, 64, 88, 152, 263, 302, 316.

- Girls, education of, 12, 31, 320. See women, education of, domestic science.
- Goddard, 877.
- "Godless schools," 141.
- Goethe, 64, 95.
- Goucher College, 182.
- Government supervision. See supervision.
- Graded system, 57, 61, 127, 157, 158, 202 ff., 277, 306. See mental measurements.
- Grammar, 154, 229. See language.
- "Grammar" schools, 21, 39, 57, 127.
- Graphic presentation, 285, 286, 287.
- Graves, F. P., 39, 159, 176.
- Great Educational Awakening, 109 ff.
- Great War, 189, 194, 224, 248, 258, 275, 300.
- Greek. See Latin, classics.
- Griscom, John, 126.
- Groos, 251.
- Grube, 267.
- Guyot, 234.
- Gymnasium, German, 61.
- Hall, G. Stanley, 165, 251, 276.
- Hall, Samuel R., 116.
- Hampton Institute, 181.
- Harper, William R., 183, 216.
- Harris, W. T., 166, 172, 176.
- Harvard University, 2, 161, 207.
- Hatch Act, 163.
- Health work in schools, 215, 238, 256 ff., 314. See athletics, clinics, hygiene, physical education, sanitation, school nurse.
- Hegel, 64.
- Herbart, 33, 64, 69, 84-94, 90, 163.
- Herbartians, 236, 240, 263-266. See National Herbart Society.
- Herbartianism, 263-266, 280, 281, 293. See correlation, culture epochs, Herbart, Herbartians, recapitulation, Rein, Ziller.
- Herbartian Society, National. See National etc.
- Higher education, 19, 39, 322. See colleges, professional education, universities, etc.
- High schools, 60, 133, 152 ff., 201, 235, 236, 191, 195, 251, 287, 288, 297, 312.
- High school curriculum, 239, 241, 258-261, 273, 287, 288. See extra-curricular activities.
- Hillegas, M. B., 279.
- History, 88, 90, 121, 153, 156, 161, 173, 236, 237, 239, 260, 261, 265, 287, 288, 293, 302, 318, 319.
- Hofwyl, 72.
- Hollis, A. P., 169.
- Home projects, 274.
- Horace Mann. See Mann.
- Hornbook, 16.
- Houses, school. See schoolhouses.
- Huxley, 161.
- Hygiene, 121, 132, 237, 239, 285. See health work, school hygiene, etc.
- Hygiene, mental. See mental hygiene.
- Illiteracy, 3, 40, 133, 215, 217, 248, 249, 273, 303, 308, 310, 314, 317, 318, 323.
- Individual differences, 277, 280. See mental measurements.
- Industrial education, 6, 17, 68, 70, 72, 107, 181, 204, 206, 214, 217, 243-250, 254, 260, 261, 294, 317. See apprenticeship, army schools, Cincinnati plan, continuation schools, corporation schools, democratic education, Fellenberg, industrial progress, Pestalozzianism, poor education of, Smith-Hughes Act.
- Industrial progress, 1, 41, 111, 146 ff., 186 ff., 233, 243, 300. See Industrial Revolution.
- Industrial Revolution, 64, 246.
- Inspection, medical. See medical inspection.
- Instinct, 31, 32, 89, 275.
- Institutes, 121-123, 165, 173.
- Instrumental music, free instruction in, 242.
- Interest, the doctrine of, 21, 33 ff., 104, 269, 293, 306. See Boy Scouts, Dewey, dramatization, Herbartians, instincts, Froebelianism,

- methods, motivation, Pestalozzianism, project teaching, Rousseau.
 Intermediate schools, 57.
 International Correspondence School, 216.
 International relations, 189.
 Investment in equipment, 195. See equipment.
 Iowa, University of, 164.
 Italy, 183.

 James, William, 165.
 Japan, 184.
 Jefferson, Thomas, 38, 39, 47, 49.
 Jena, 85, 88, 91, 94, 101, 263.
 Jessup, Walter, 285.
 Johns Hopkins University, 165.
 Jones, M. E. M., 167.
Journal of Education, 176.
Journal of Educational Psychology, 299.
Journal of Educational Research, 299.
 Judd, Prof. Charles H., 52, 285.
 Junior high school, 207, 233, 273.
 Junior Red Cross, 301.

 Kansas silent reading test, 279.
 Kant, 64.
 Keilhau, 88, 96.
 Kelly, F. J., 279.
 Kennedy, John, 202.
 Kindergarten, 97 ff., 171 ff., 255, 275.
 See primary school.
 Krüsi, Hermann, 167.

 Labor and capital, 147, 187, 321.
 Laboratories, 58, 107, 195, 273.
 Lancasterian system, 158. See monitorial system.
 Land grant colleges, 178. See agricultural colleges.
 Land grants, 132, 178. See Morrill Act.
 Language, 68, 154, 229, 260.
 Languages, 58, 129, 154, 260, 261, 282, 287, 288.
 Latin, 20, 21, 60, 61, 162, 259, 282, 283, 287, 288.
 Law of 1642, 4.
 Law of 1647, 3, 18.

 Law of 1834, 49.
 Law schools, 163, 220.
 League of Nations, 235.
 Leipzig, 90, 165, 263.
 "Leonard and Gertrude," 67, 72.
 Lewis, Samuel, 124.
 Libraries, 121, 217, 218.
 Literature, 16, 21, 41, 58, 88, 90, 150, 153, 188, 228, 259, 260, 261, 265, 293, 321.
 "Little Men," 125.
 Local autonomy, 130, 142, 143, 144.
 Local taxes, 6, 7, 8, 9, 40, 43, 44, 49, 137 ff., 177, 179, 184, 185, 210, 212, 223, 310. See "rates."
 "Lock step," 280. See grading.
 Lutherans, 123, 141.
 Lyon, Mary, 131.

 McConathy, Osborne, 242.
 McMurry, C. A., 222, 228, 263.
 McMurry, Frank, 263.
 Madison, James, 38.
 Management, classroom. See classroom management.
 Mann, Horace, 76, 116-123, 124, 125, 126, 129, 132, 138, 141, 169.
 Manual training, 107, 157, 243, 244, 265, 282, 287, 288.
 Mason, Lowell, 126.
 Massachusetts, 1, 3, 4, 17, 18, 20, 52, 122, 211.
 Mathematics, 20, 61, 244, 259, 260, 261, 283, 287, 288.
 Median, 292.
 Medical inspection, 256, 285, 303, 315, 320.
 Medical schools, 131, 163, 220.
 Mental hygiene, 280.
 Mental measurements, 249, 277, 305 ff.
 Mental tests. See mental measurements.
 Methods, 17, 26, 30, 50 ff., 54 ff., 62, 87, 92, 107, 122, 132, 185, 192, 195, 203, 205, 219, 226, 231, 233, 236, 240, 241, 242, 244, 247, 248, 251, 252, 255, 263, 264, 266, 267, 271, 273-275, 277, 278, 280, 281, 301, 317, 322. See disciplinary theory, interest, motivation,

- project, self-activity, social participation.
- Michigan, 48, 124, 162.
- Mills, Caleb, 124.
- Monitorial system, 54 ff., 203, 306.
- Monroe Doctrine, 41.
- Montessori, 275.
- "Moonlight schools," 216.
- Moral education, 15, 121, 155, 160, 189, 247, 252, 271, 277, 321. See Boy Scouts, religious education.
- Morehouse, Frances, 280.
- Morrill Act, 163, 245. See land grants.
- Morse's Geography, 50.
- Mothers as teachers, 3, 9, 57, 132.
- Motivation, 18, 21, 107, 230, 251, 274. See Froebelianism, Herbartianism, culture epochs, interest, Pestalozzianism, self-activity, social participation, Rousseau.
- Moving pictures, 80, 216, 219.
- Music, 16, 121, 126, 154, 156, 161, 200, 219, 241, 251, 260, 261, 273, 276, 282, 287, 288, 321. See Instrumental music.
- Mysticism, Froebel's, 101, 275.
- National Educational Association, 127, 165, 175, 208, 236, 259, 265, 311, 313.
- N. E. A. Commission. See Commission, N. E. A.
- National Herbart Society, 264.
- Nationalism, 40.
- Nationalization, period of, 38, 63, 73.
- National Society for the Study of Education, 264, 284, 298.
- Naturalization, 29, 30, 31, 32, 35, 36, 103.
- Nature study, 157, 170, 173, 266.
- Negroes, education of, 181. See Freedmen's, etc., industrial training, Hampton, South, Tuskegee.
- Neuhof, 67, 71.
- New England, 1, 4, 5, 7, 8, 9, 12, 16, 18, 41, 48, 57, 115, 127, 163, 173, 179, 278.
- New England Common School Revival. See Great Educational Awakening.
- New England Primer, 13 ff., 50, 51.
- New Froebelianism, 267.
- New York, 1, 5, 42, 46, 169, 211.
- New York City, 3, 43, 44, 45, 123.
- Nicotine, 237.
- Night schools, 204, 216, 243 ff., 255.
- Normal schools, 121, 122, 167 ff., 185, 257, 264, 296, 311, 312. See training of teachers.
- North Central Association, 298.
- Norway, 144.
- Nurse. See school nurse.
- Objective method, 68, 70, 74, 126, 219, 233, 266. See Pestalozzianism.
- Orchestras, 242, 273, 274.
- Oswego Normal School, 166 ff.
- "Outlines of Educational Doctrine," 86.
- Page's "Theory and Practice of Teaching," 175.
- Papers, school, 251.
- Parker, Col. Francis W., 172, 175, 229, 234, 235, 240, 265, 267.
- Parker, S. C., 27, 51, 56, 75, 90.
- Parochial schools, 141, 145, 184, 197, 255, 305. See "voluntary."
- Part-time schools, 145, 317. See night schools.
- Pauper schools, 45, 48.
- Peabody, Elizabeth Palmer, 125, 171.
- Peabody Fund, 181.
- Pedagogical fads. See fads.
- Pedagogical literature, 125 ff., 175, 185, 298 ff.
- Pedagogical Seminary*, 299, 176.
- Pedagogy. See science of education, theory of education.
- Pennsylvania, 4, 6, 17, 47 ff., 49, 123, 139, 169, 213. See Germans, Law of 1834, Philadelphia.
- Pennsylvania Law of 1834, 141.
- Periodicals, educational, 274, 299. See various periodicals listed in italics.
- Perry, C. A., 254.
- Pestalozzi, 22, 33, 37, 64 ff., 125, 126, 175, 266.
- Pestalozzianism, 62, 70, 82, 83, 86,

- 156, 157, 166-171, 181, 219, 233, 234, 266.
- Phi Beta Kappa, 58.
- Philadelphia, 1, 46, 56, 59, 286.
- Philanthropy, 44, 48, 181. See poor, pauper, etc.
- Philbrick, John D., 168.
- Philosophy of education. See theory of education.
- Phonics, 227.
- Phonograph, 219, 241, 242, 274.
- Physical education, 35, 157, 170, 238, 251, 252, 258, 260, 285, 287, 288, 303, 314. See athletics, Boy Scouts, health work, hygiene, sanitation.
- Physiographic theory, 233.
- Physiology, 160. See hygiene.
- Pierce, John D., 124, 129.
- Pike's Arithmetic. See arithmetic.
- Plato, 21, 39.
- Play, 136, 195, 247, 250 ff., 268, 274. See Groos, Hall, Spencer.
- Poor, education of, 2, 3, 25, 43, 45 ff., 145, 172, 317, 323. See Free School Society, pauper schools, philanthropy, S. P. C. K., S. P. G., "voluntary" schools, etc.
- Population, growth of, 41, 110, 148, 192.
- Popular Education*, 176.
- Portland Survey, 283.
- Primer, New England. See New England Primer.
- Primary schools, 57, 127, 128, 132, 274.
- Primary Education*, 299.
- Princeton University, 20.
- Private schools, 7, 8, 9, 12, 16, 62, 45, 47, 61, 145, 197, 223, 305, 316. See "voluntary" schools.
- Problem solving, 270.
- Professional education, 182, 200, 219. See the various professions.
- Professionalizing teaching. See training of teachers.
- Pro-German, 305, 323.
- Progress, 192. See industrial progress, social progress.
- Projects, home. See home projects.
- Project teaching, 107, 244, 252, 268.
- Prussia, 82, 88, 99, 126.
- Psychology, 52, 71, 79, 94, 165, 203, 240, 250, 251, 266, 269, 275-281, 293. See child study, educational psychology, mental measurements.
- Public schools, 9, 41, 48, 49, 60, 61, 132, 181.
- Pupils' achievements. See standard tests.
- Puritanism, 3, 16, 20.
- Puritans, 17.
- Quincy Movement, 172, 173.
- Radicalism, 306.
- "Rates," 6.
- "Ray's Third Part." See arithmetic.
- Reading, 15, 51 ff., 81, 132, 156, 226, 267, 279, 281.
- Reading methods, 50, 122, 226, 267, 281.
- Recapitulation, 90, 268.
- Recent period, 186-324.
- Recitation, 92, 280.
- Recreation, 321. See Froebelianism, moral education, play.
- Red Cross. See Junior Red Cross.
- Rein, 91, 263.
- Religious education, 30, 255 ff. See catechism, moral education.
- Religious Education Association, 256, 298.
- Religious motives in education, 3, 5, 8, 12, 17, 40, 41, 45, 130, 131, 150, 189. See parochial schools, philanthropy, poor, "voluntary" schools, etc.
- Research. See educational research.
- Results. See standard tests.
- Retardation, 284.
- Revolutionary War, 1, 12, 16, 19, 20, 23, 38, 40, 43, 50, 58.
- Rousseau, 22-37, 65, 70, 103, 105, 108, 202, 270, 276, 293.
- Rural education, 158, 188, 208, 214, 215, 258, 306, 307 ff., 314. See district schools, etc.
- Russell, Dean J. E., 252.
- Russia, 303, 317.

- Sand tables, 173.
 Sanitation, 121, 195, 237.
 Scales, 279. See standard tests.
 Schelling, 64.
 Schiller, 64, 95.
 Schleiermacher, 64.
School and Home Education, 176.
School and Society, 297, 299.
 School architecture, 258.
 School boards, 130, 137, 284.
 School clinics, 257.
 School district. See district system.
 Schoolhouses, 11, 57, 121, 122, 133, 195, 255, 284, 286, 301, 308.
 School hygiene, 256, 284, 285, 303.
 School laws. See Law of, etc.
 School management. See classroom management.
 School nurse, 257.
School Review, 176.
 "Schools of Tomorrow," 107.
 School year, 121, 122, 191, 193, 308, 310.
 Schurz, Frau, 172.
 Science, 20, 129, 153, 160, 219, 224, 259, 260, 261, 273, 287, 288, 319.
 See agricultural education, Eliot, Harris, Huxley, nature study, Spencer.
 Science of education, 77, 275-278, 281, 283-299. See costs, educational sociology, mental measurements, psychology, surveys, etc., etc.
 Science teaching, 159.
 Score cards, 286, 291.
 Scouts. See Boy Scouts.
 Secondary curriculum, 160-162.
 Secondary education, 19, 39, 59 ff., 132, 152 ff., 186, 196-198, 203, 207, 223, 267, 272, 273, 279, 316.
 See academies, college entrance, gymnasium, grammar schools, high schools, junior high school, North Central Association.
 Secular control, 140, 183, 305. See democratic education, local taxes, state administration. See religious motives.
 Self-activity, 102 ff., 267-270, 274, 294, 301. See Froebel, etc., interest, problem solving, project teaching, motivation. See social participation.
 Sheldon, E. A., 156.
 Shortage of teachers, 311 ff., 324. See wages.
 Shorthand, 157, 260. See commercial.
 Simon, Dr. Th., 277. See Binet.
 Six-three-three plan, 208. See junior high school.
 Slater Fund, 181.
 Sloyd, 157. See manual training, Froebel, etc.
 Smith College, 182.
 Smith-Hughes Law, 215, 245, 307. See industrial education.
 Smith-Lever Act, 215, 245, 252, 266. See agriculture.
 Smith-Towner Bill, 314, 315. See democratic education, South, universal secondary education.
 Smith, W. R., 295.
 Social participation, 102, 104 ff., 267-274, 301. See interest, motivation, Froebel, etc. See self-activity.
 Social problems, 151, 162, 188.
 Social progress, 1, 23, 41 ff., 113 ff., 149, 186, 258, 262, 271, 300, 301, 313, 314, 318, 319, 320, 323, 324. See democracy, industrial progress, social reform.
 Social reform, 67, 70, 137, 142, 143, 182, 269, 272, 273, 306, 309, 316, 317, 321. See social progress.
 Social studies, 161, 162, 236, 239, 306. See citizenship, democratic education.
 Society for the Promotion, etc. See S. P. C. K., S. P. G.
 Society for the Study of Education. See National Society, etc.
 Society, Free School. See Free School Society.
 Sociology, 185, 188, 294, 306, 319, 320. See economics, social studies.
 Sociology, educational. See educational sociology.
 South, the, 2, 8, 47, 124, 132, 151, 169, 180-182, 252, 310, 311, 323.

- Spanish American War, 189.
 Spaulding, F. E., 304.
 S. P. C. K., 44, 62.
 Special methods, 281, 297. See reading, writing, etc.
 Spelling, 50, 71, 135, 154, 174, 229, 278.
 Spelling Book, Webster's. See Webster's, etc.
 Spelling methods, 50, 122, 231.
 Spencer, Herbert, 160, 251.
 S. P. G., 44.
 Standards, 290.
 Standard tests, 232, 278 ff., 281, 285, 290 ff., 297.
 Stanz, 68, 71.
 State administration, 19, 129, 141, 179. See state aid, state superintendent.
 State aid, 43, 44, 121, 122, 144, 179, 212, 214.
 State superintendent, 29, 130, 179, 211, 213, 252.
 Statistics, educational, 192, 193, 284, 287, 288.
 Stewart, Cora Wilson, 217.
 St. Louis, 166, 172, 286.
 Stowe, Calvin E., 126, 127, 129.
 St. Paul Survey, 283, 291.
 Strayer, G. D., 285.
 Student activities, 107, 273. See extra-curricular activities, social participation.
 Sub-normal children. See mental measurements.
 Summer schools. See institutes.
 Sunday schools, 306.
 Superintendence, N. E. A. Dept. of, 178.
 Superintendent, city, 137, 197, 284, 292.
 Superintendent, county. See county superintendent.
 Superintendent, state. See state superintendent.
 Supervision, 19, 52, 61, 207, 278.
 Supervision of private schools by the government, 247, 305.
 Surveys, 297 ff. See educational surveys.
 Switzerland, 65, 85, 86
 Sweden, 183.
 Taxes, local. See local taxes.
 Teachers, 11, 16, 21, 54 ff., 57, 285, 308. See certification.
 Teachers, shortage of. See shortage of teachers.
Teachers College Record, 299.
 Teachers' unions, 313.
 Teachers' wages. See wages of teachers.
 Teachers, women. See women as teachers.
 Teacher training. See colleges of education, normal schools, training of teachers.
 Technique of teaching, 278, 322. See methods.
 Temperance teaching, 237.
 Terman, L. M., 277.
 Tests, army. See mental measurements.
 Tests, mental. See mental tests.
 Tests, standard. See standard tests.
 Textbooks, 12, 14, 16, 50 ff., 121, 122, 242. See New England Primer, Webster's Speller, and the various subjects.
 Textbooks, free. See free textbooks.
 Theology, 18.
 Theory of education, 160, 166, 190, 205, 248, 263-283, 293 ff., 295.
 Thomas' "Source Book," 90.
 Thorndike, E. L., 276, 279.
 "Three R's," 51, 155. See reading, writing, arithmetic.
 Town. See township.
 Township, 7, 12, 18 ff., 43.
 Trades education. See industrial education.
 Training of teachers, 132, 164, 167 ff., 185, 295 ff., 308, 311, 314, 323. See pedagogical literature, teacher training, periodicals, etc.
 Transference of training. See disciplinary theory.
 Transition period, 146-185.
 Transportation, 139, 147.
 Trusts, 148, 186 ff.
 Tuition, 7, 44, 48, 60, 61, 152, 323.
 Tutors, 2, 3, 243.
 Type solids, 240.

- Unions, teachers'. See teachers' unions.
- Uniforms, 139.
- Universal education, 68, 132, 145. See illiteracy.
- Universal secondary education, 60, 145, 185, 196, 273, 315, 317, 321.
- Universities, 130, 199, 216. See colleges, Chicago, Columbia, Harvard, Yale, etc., etc., German universities, higher education.
- Universities, German, 200. See Berlin, Jena, Leipzig, Zurich.
- University of Chicago, 200, 216, 236, 268.
- University of Iowa, 164.
- University of Michigan, 200.
- University of Pennsylvania, 38, 59.
- Vacations, 132.
- Vassar College, 181.
- Ventilation, 256. See school hygiene, sanitation.
- Vocational education, 215, 255, 305, 307, 320. See industrial education.
- Vocational guidance, 249 ff., 277, 320.
- Volkschulen, 61. See German education.
- Voluntary educational associations, 127, 298. See N. E. A., Religious Education Association, etc.
- "Voluntary" schools, 145, 184, 223. See English education, parochial schools. See "board" schools.
- Vincent, Bishop J. H., 183.
- Virginia, 1, 2, 9, 20, 39, 47, 132, 181. See South.
- Wages of teachers, 11, 121, 191, 194, 312, 324.
- Ward, Lester F., 190, 269, 294.
- War of 1812, 41, 54.
- War-time activities, 300.
- Washington, George, 38, 190.
- Webster, Noah, 50, 51.
- Webster's Spelling Book, 50.
- Wellesley College, 182.
- Wells, H. G., 262, 302.
- White, E. E., 175, 178.
- Wider use of the school plant, 254 ff., 321. See community center, equipment, Perry, C. A.
- William and Mary College, 20, 39, 58.
- Williams College, 58.
- Wirt, William A., 205.
- Women as teachers, 57, 135, 182, 191, 194. See dame schools, mothers as, etc.
- Women, education of, 31, 131, 182, 221. See girls education of.
- World War. See Great War.
- Writing, 16, 51, 267, 278.
- Yale University, 20, 58, 165, 217 ff.
- Y. M. C. A. schools, 217 ff., 249.
- Yverdon, 69, 71, 75, 82, 88, 96.
- Y. W. C. A., 249.
- Ziller, 90, 92, 263.
- Zurich, University of, 65.

379.73 F514B c.1

Finney # A brief history
of the American public sc

OISE



3 0005 02025106 5

379.73

F514B

Finney

A brief history of the American

379.73

F514B

Finney

A brief history of the American
public school

